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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Stories of the Week
Gags of the Week
Troubles Dept.
Winston Churchill on Long Life
Advice from a Taxi Driver
TV Troubles
What Price Glory?
Another Illusion Shattered
Hooray for the Hoosiers!

Stories of the Week

Sally, at 15, was the eldest of 12 children. When she was fitted into her first formal her mother exclaimed:

"You're simply beautiful, Sally. Of course, I'm prejudiced."

"Oh, no, Mother! Not again!"

Sunday school teacher expounded that God made our noses to smell, our feet to run. . . .

"Miss Parks," interrupted Robin, "God made a mistake with my kid brother. His nose runs and his feet smell."

"Jed sat up all night trying to figure where the sun goes when it sets."

"Did he come up with an answer?"

"Yep. It finally dawned on him."

"The ups and downs don't bother me," sighed Gertie, girl elevator operator, "so much as the jerks."

Gags of the Week

There isn't much to talk about at some parties until after one or two couples leave.

By the time a man learns to understand women, his wife won't let him out of the house at night.

In Hollywood, many a live wire would be dead except for his connections. — MIKE CONNOLY.

When tempted to gossip, breathe through your nose.— *Pulpit Digest.*

What you don't know won't hurt you, but it may make you act pretty stupid.—*Banking.*

And then there was the Texan who joined the Navy so the world could see HIM.

A smile is something that adds to your face value.

Troubles Dept.

Under the headline, "So You Think You Have Troubles?" an

(Concluded on Page 12, Col. 1)

Fedders 1-Hp. 7½-Amp. Unit Runs on 115 Volts

NEW YORK CITY—What is claimed to be the first 1-hp., 7½-ampere room air conditioner to run on regular 115-v. current was introduced here by Salvatore Giordano, president of Fedders-Quigan Corp. at a press conference in the Sheraton-Astor hotel.

Fedders' new "Super-Supreme" 1-hp. air conditioner operates "anywhere a 7½-ampere, ¾-hp. unit can—without special re-wiring costs," according to a company statement.

Super-Supreme incorporates a two-cylinder hermetic compressor that provides a high pumping rate with a low-amp motor due to greater piston displacement, it was stated. This combined with heavy-duty three-row condenser and large evaporator delivers additional cool-

(Concluded on Page 8, Col. 5)

ASHAE To Offer 2 Symposiums, At June Meeting

NEW YORK CITY — The American Society of Heating & Air-Conditioning Engineers has announced the program for its semiannual meeting to be held June 24-26 in the Manoir Richelieu, Murray Bay, Canada.

(Concluded on Page 41, Col. 2)

Kelvinator Adds 10 Larger Sealed Condensing Units

DETROIT — Kelvinator has announced an expansion of its hermetically sealed condensing unit line in sizes up to 2 hp.

Robert G. Alexander, sales manager of the commercial wholesale department, announced that 10 larger sealed units have been added, in sizes ranging from ¾ to 2 hp. New models available are both air and water cooled.

The new hermetic condensing units are being made to Kelvinator engineering specifications by the Evansville, Div., Bendix-

(Concluded on Back Page, Col. 1)

Mitchell Offers 3 Heat Pump Room Unit Lines

CHICAGO—Three new lines of heat pump air conditioners featuring a newly-developed instantaneous reverse cycle switch as part of the "Weath'r Dial" were announced by J. W. Alsdorf, president of Mitchell Mfg. Co.

Units equipped with the heat pump are available in ¾, 1, and 2-hp. sizes, it was stated.

"In the past, the greatest volume of sales in heat pump room air conditioners has been in the southeastern portion of the

(Concluded on Back Page, Col. 1)

Residential, Room Unit Outlet '57 Sales May Turn on Weather

A spot check of a dozen air conditioning distributors, dealers, and contractors accross the country to determine how business this year compares with last year—particularly regarding residential and room unit sales—disclosed mixed results. Not all of them are "feeling good" nor are all "feeling bad." Generally speaking, the feeling seems to depend pretty much on local weather conditions. Here are the answers given to questions on sales, profits, and prices:

"Sales of residential air conditioning equipment in Miami, Fla. are moving ahead reasonably well," says Everett G. Carroll, president of Hill-York Corp. "A good share of our business is in residential units, particularly heat pumps, and we look for a good year."

Carroll reports room air conditioners have moved very well in the last 30 days. Even though Miami, too, has had some cool weather, an early season newspaper campaign has stimulated sales which Carroll believes will hold up all year.

Profits should be a little better than last year, and with proper prices on units, "it is anticipated sales will be good this year." A distributor to about 20 dealers, Hill-York stresses heat pumps. Carroll looks for steadily improving sales in that line.

"Amazingly enough," claims Stan Fried, advertising manager of L & P Electric Co. (and Apparatus Distributors Corp.) in New York City, "air conditioning sales so far this year are a little higher than last." This despite New York City's being afflicted with an unseasonably cold spring.

"Residential sales are up," Fried said. (He pointed out that L & P handles only remotely-installed cooling units of 2 and 3 tons.) He thinks that with the addition of the larger 3-ton unit, the firm's residential field is not so limited and sales will continue to climb.

He decried the big problem of getting adequately trained installation personnel. "We won't have any trouble in hot weather selling these remote residential units, only in getting them properly installed," Fried stated.

There is no tight money ailment in the New York City area, Fried feels. "The only reason room air conditioners were a little slow recently was due to

(Continued on Page 4, Col. 1)

ASRE May Take on 'New Look' Explore Closer Tie with ASHAE

MIAMI BEACH, Fla.—In one of its liveliest and most successful annual meetings here June 2-5, the American Society of Refrigerating Engineers gave promise of taking on a "new look" in a number of ways.

The meeting was held in the "fabulous" Fontainebleau hotel here, with the young south Florida section of ASRE doing a fine job as host. The setting also aptly demonstrated how air conditioning of hotel public and guest rooms makes possible the holding of summer conventions in the "warmer" areas of the country.

Possibly the most newsworthy development coming out of the meeting was the bringing out into the open the fact that the "possibility" of a merger or some form of amalgamation with the American Society of Heating & Air-Conditioning Engineers is being "explored."

This is a subject that has been known to have been under

(Concluded on Page 21, Col. 1)

Lose 2 Leaders!

Paul B. Reed Cancer Victim

MILWAUKEE, June 13—Paul P. Reed, educational director for the Refrigeration Service Engineers Society, and writer of the column "Refrigeration Problems and Their Solution" which was published in AIR CONDITIONING & REFRIGERATION NEWS for over 15 years, died here today, a victim of cancer. He was 61.

Paul Reed was one of the most widely known men in the air conditioning and refrigeration industry. He had spent his entire life in the industry, and the past 10 years of his life had been devoted to advancing the knowledge and techniques of refrigeration service engineers all over the world, in his ca-

(Concluded on Page 41, Col. 4)

H. F. Spoehrer

James Emmett Dies at 52

CHICAGO — James Emmett, Jr., 52, vice president in charge of sales for James P. Marsh Corp. and a past president of the Air-Conditioning & Refrigeration Institute, died recently of a heart attack.

The attack occurred while Emmett was en route to his home in Hinsdale, Ill. from a business trip to Texas. Born in England and educated at Oxford university, he was active in the sales division of Marsh for over 30 years, rising to vice president in charge of sales in 1956.

He was one of the pioneer executives in the air conditioning and refrigeration parts field

(Concluded on Back Page, Col. 5)

Find Antibiotic Preservatives May Be Harmful to Man

DETROIT—Researchers from the University of Missouri reported here that they have found use of antibiotics to preserve meats and other foods may be dangerous to consumers.

Drs. Barbara Read, Herbert S. Goldberg, and R. N. Goldman discovered that animals fed a prolonged diet of food that had

(Concluded on Back Page, Col. 4)

BEHIND PAGE ONE . . .

Builds Residential Firm from Scratch
Offers Quality Product, Neat Installation, Good Service, and Passes Up Profitless Jobs..... 6
Battery Test Chamber
Automatic, 'Certain' Defrost Is Must..... 9
Room Air Conditioners
Promotions Spur Markets for Dealers..... 13
'Comfort Engineering'
Is It Key to Home Air Conditioning Boom?..... 14
Why Capillary Tubes?
Engineer Outlines Advantages, Reviews Design and (Few) Service Problems..... 16
Winter Humidification
Sprayed Coil Method Advocated To Raise Relative Humidity, Safeguard Health..... 24
The Women Like It (2)
Forum Reviews Owners Views..... 30
Roadside Refreshment Stands
Showing Owners How They Can Operate Year-Round Ups Dealer's Volume..... 33
Selling Used Equipment
Applying New Fixture Merchandising Boosts Volume To 15 of Gross..... 34
Solders, Fluxes 38

Mueller To Draw Current Data on Short, Long-Term Trends from Dealer Council

MILWAUKEE—A "two way street of information" between a manufacturer of heating and air conditioning equipment and its dealers has been paved with the formation of a Dealer Council by Mueller Climatrol, a division of Worthington Corp.

The Council was designed to prove closer contact between the company and its dealerships and speed the transfer of ideas and opinions.

Eight dealers were selected from all over the country to obtain a variety of opinion. At their monthly meetings the members will discuss specific product design problems, product trends, public relations for the dealer, product promotion, traffic, financing, sales, and those subjects which are related to the heating and air conditioning industry.

The company will obtain current field information on short and long term industry trends and the dealers will be able to draw on Mueller Climatrol's top management team's know-how and experience for information and answers to their questions, it was pointed out.

A new group of dealers will be chosen every year. The 1957 Dealer Council membership consists of:

W. A. Brainerd, president, Anderson Heating Corp., New Haven, Conn.; F. C. Ault, Ault Roofing & Heating Co., Orlando, Fla.; Louis M. Droste, Droste Heating Co., St. Louis; John D. Frimberger, Frimberger Sheet Metal Co., Saginaw, Mich.; Herbert M. Blue, Goodrich Co., Albuquerque, N. M.; Walter Stevenson, president, Hoosier Heating & Sheet Metal, Terre Haute, Ind.; John W. Lock, J.W.L. Heating Co., Inc., Cheektowaga, N. Y.; and H. F. Iler, vice president, Wolff, Kubly & Hirsig Co., Madison, Wis.

Attending the first meeting for Mueller Climatrol, June 20 and 21, at its Milwaukee headquarters will be: Harold P. Mueller, Sr., president; Frank J. Nunlist, executive vice president; H. P. Mueller, Jr., vice president in charge of sales; and various members of the company's management group.

Outlet Names Gunn

LITTLE ROCK, Ark.—H. Leland Gunn has been elected a director, vice president and secretary of Gunn Distributing Co., a distributor in Arkansas for Coleman air conditioning and heating and Sunbeam appliances.

Directors To Speak at NARDA Confab In St. Louis June 23

CHICAGO—The national mid-year get-together of the National Appliance & Radio-TV Dealers Association will be a one-day meeting of retailers at the Chase hotel, St. Louis, Sunday, June 23, NARDA President Ken Stucky announced.

The meeting is being held through the cooperation of the Greater St. Louis Appliance Dealers Association. It will begin at 2 p.m. and continue through a banquet that evening.

Speakers at the meeting will be chosen from the members of NARDA's board of directors who will hold their mid-year meeting on the day prior to the general membership gathering.

Total registration fee is $7.50, which includes attendance at the afternoon session and the banquet. Checks and requests for accommodation arrangements should be sent to Samuel B. Singer, Schweig-Engel Co., 4919 Delmar, St. Louis. Singer is general chairman of the Profit and Management Clinic and president of the Greater St. Louis dealer group.

No NARDA meetings will be held in Chicago in conjunction with the Summer Furniture Market this year.

Refrigerated Warehouse Firms Pool Facilities In Nationwide Network

CHICAGO—A nationwide refrigerated warehouse organization has been formed under the name of Trans-American Refrigerated Services, Ltd., it was announced recently.

Five independent refrigeration warehousing companies are pooling their frozen foods and perishables storage facilities to form a network of 27 warehouses in 21 cities.

Plant ownership has not changed hands but sales and service facilities of all members have been coordinated, with each company representing all the other member companies.

Participating companies are: Merchants Refrigerating Co., with plants in New York, Buffalo, Jersey City, Newark, St. Louis, Vinita Park, Mo., Hopkins, Minn., and Modesto, Calif.; Terminal Ice & Cold Storage Co., Portland, Salem, Hillsboro, and Woodburn, Ore., and Nampa, Idaho; Continental Freezers of Illinois, Inc., Chicago; Quincy Market Cold Storage & Warehouse Co., Boston, Watertown, and Gloucester, Mass., Portland, Me., and Troy, N. H.; and Wisconsin Cold Storage Co., Milwaukee and Marshfield, Wis.

Lowell E. Kern, executive vice president and general manager of Terminal Ice & Cold Storage Co., Portland, Me., is president of the organization.

Deem It Insufficient

N.Y. Landlords To Fight Rewiring Rent Raise

NEW YORK CITY—A row is developing over the recent ruling by the State Rent Commissioner granting a $2.75-a-month rent increase to landlords who rewire apartments for greater electrical capacity.

One landlord group indicated it would go to court to upset the ruling.

The Metrapolitan Fair Rent committee, representing the real estate boards of the city's five boroughs, contends the ruling "will discourage" modernization of older buildings because "the increase is insufficient" to cover rewiring costs for larger apartments.

Dealer Opens Doors

SHERMAN, Texas — Sanderson-Hurley, featuring air conditioners and other merchandise, has held formal opening in its new location at 214-16 South Travis St. Sandy Sanderson and Bill Hurley are co-owners of the business.

KRAMER

"F"

THERMOBANK

OPENS

A NEW ERA

IN

REFRIGERATION

OF

FRESH FOODS

A NEW THERMOBANK DESIGNED SPECIFICALLY FOR FRESH FOOD

For years, research and experience in the fresh food storage field have emphasized that most fresh food can be kept in salable condition for considerably longer time when stored at 30° to 32° with a minimum variation of temperature and humidity. The new "F" THERMOBANK provides, for the first time, an economical refrigeration system for fresh food at the 30° to 32° level and it embodies all the valuable features of the THERMOBANK re-evaporative hot gas defrost system that have made THERMOBANK the standard of the industry.

LIFE OF FRESH FOOD EXTENDED
With the old "off-cycle" defrosting, there are continual wide temperature and humidity fluctuations and it is not possible to maintain temperatures below 35°. The new "F" THERMOBANK eliminates "off-cycle" defrosting and maintains constant temperature and humidity by operating with the fewest possible defrost periods of the shortest possible duration; "F" THERMOBANK means less waste, longer shelf life, less dehydration, less mold and bacterial infection and retention of "freshness" during storage.

"F" THERMOBANK COSTS LESS
Because the "F" THERMOBANK guarantees rapid and complete defrost, equipment is safely selected for 20 hours operation. This results in the selection of a smaller THERMOBANK system and a smaller compressor giving low first cost and economical operation.

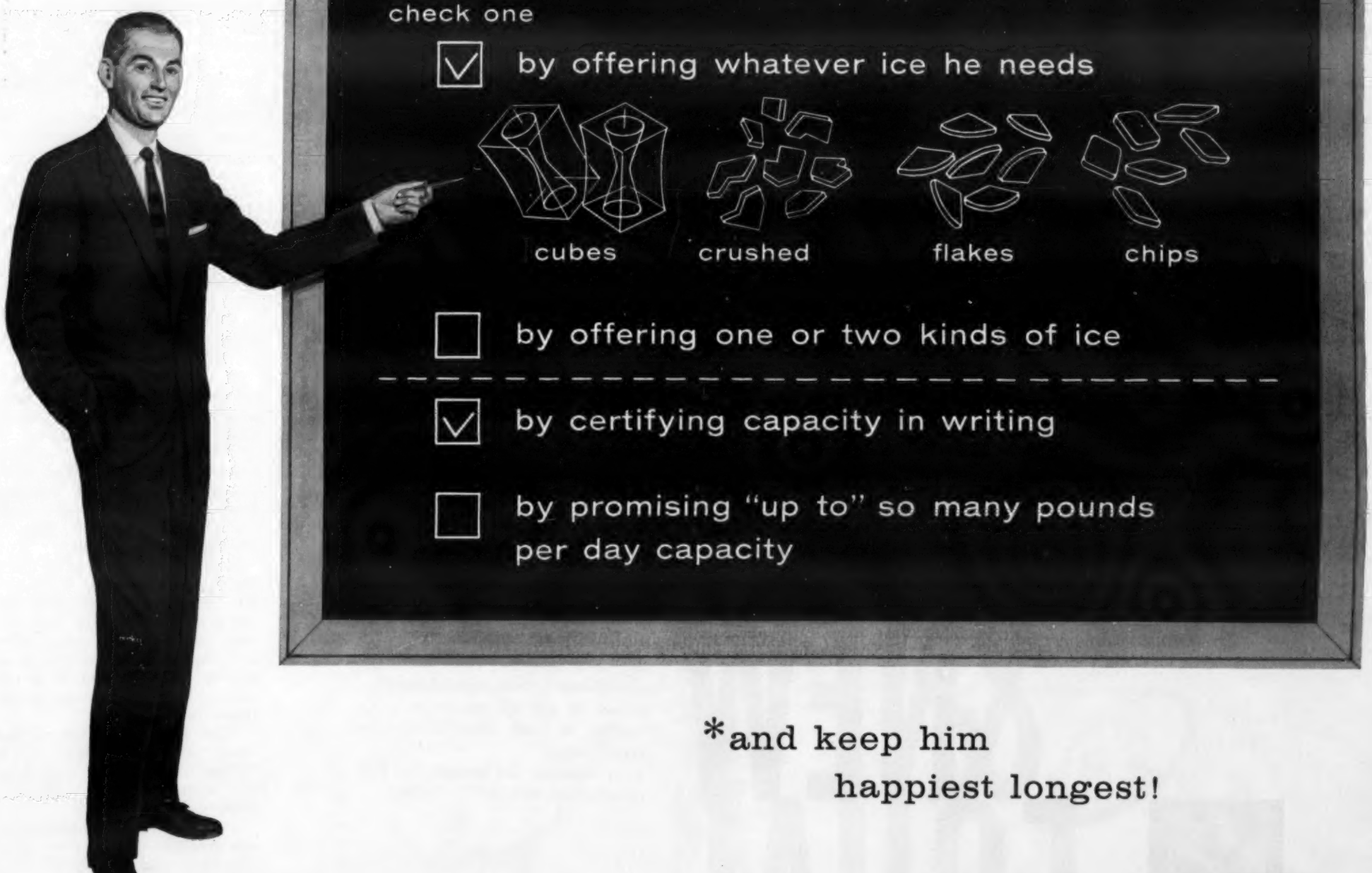
WRITE FOR BULLETIN TV-380

KRAMER TRENTON CO.
TRENTON 5, NEW JERSEY

43 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

For more information about products advertised on this page use Information Center, page 26.

which way can you sell a prospect fastest?*



***and keep him happiest longest!**

The right answers are obvious. And when you represent Carrier, you're the man with the *right* answers.

Carrier's 15 ice machines let you offer any prospect just the unit that's right for him—and they provide him a choice of gray, white and stainless finishes, too.

Only Carrier gives you the sales-clincher of Certified Capacity, a firm guarantee *in writing*. And the capacity you certify is based on local air and water temperatures—not those found in some remote laboratory!

So, you're bound to close more deals. You're backed by the two most convincing "closers" in the business.

Get in on a good thing now. Be the man with the *right* answers: the Carrier man. Call your local Carrier distributor, or drop a line to Carrier Corporation, Syracuse, New York.

ICEMAKER CHIPMASTER FLAKEMASTER

Carrier air conditioning · refrigeration

For more information about products advertised on this page use Information Center, page 26.

Outlook 'Good for Residential Sales'; 'Had Good May Sales'; Hot Weather 'Will Bring Sales Up'

(Continued from Page 1, Col. 3)

cool weather. But we believe the summer has just started. Room units will zoom when the expected hot weather comes."

A national room air conditioner window display together with "our tremendous advertising job early this year has laid the groundwork for a big sales year." L & P has promoted the attic-type unit to builders and if dealers will send men in to be trained to install the air conditioners properly, the outlook is good for sales, Fried indicated.

Early Season Promotion Boosted Sales

"This early season promotion enabled us to cut a large piece of the pie in room air conditioner sales prior to the recent cool spell," he asserted. Hot weather, Fried thinks, will push room unit sales to such a point that New York City area distributors and dealers "won't be able to keep up."

"Just cool weather, not tight money or anything else, is the reason our room air conditioner sales are running behind 1956 thus far this year," declared Don Thomas, assistant manager of Burton Co., air conditioning distributor division in Detroit for Star Steel Co. "However, I can't give the exact percentage ratio sales are down."

Residential air conditioning units are moving along in good shape, Thomas indicated. "They are about the same as last year at this time."

Thomas is convinced that the advent of warmer weather will get room air conditioner sales back where "we expected them to be" as the summer progresses. Profits and prices are approximately the same at this time as last year, he said. Thomas forecasts, "We will come out just about the same as in 1956 along that line."

'Cool Weather Only Problem'

There is no particular answer —other than cool weather—to the question as to why room units haven't been moving as predicted, Thomas feels. "But now that the big department stores, with big advertising budgets, have begun pushing room air conditioners, it will help us.

"Dealers have complained 'How can they get away with advertising units as such prices?' But it has long been my belief that where a major appliance outlet can promote such units, it helps all along the line," he commented.

A warm May put room air conditioner sales a little ahead of last year, according to Raymond Long, Jr., store manager of Price's Inc., Norfolk, Va. dealer. "However, an unseasonable early June saw that month fall behind 1956."

Now that the weatherman has predicted hot weather, and after people suffer a few days sales will pick up, Long insists. "It's solely the weather; otherwise room unit sales would be fine."

Profits are good so far this year, he indicated, and price is better than last year. "This helps sales now," he averred. Price's also handles a brand of auto air conditioners and the same buying trend has occurred in that line as with room units, Long stated. "However, we are approaching our peak season and sales are expected to be good in both lines."

Price's salesmen alternate between selling outside the store and in. Currently the firm is conducting a room air conditioner sales contest to sell as many as it can. Salesmen sell up to walk-in customers, Long remarked. "Once a prospect gets interested in a model, there is no trouble as to price," he continued.

'No Trouble Selling Units'

Wallace Johnston of Wallace Johnston Appliances in Memphis agrees. "I just bought a carload of room air conditioners and don't expect to have any trouble selling them."

July 4 is Memphis' "break point," Johnston feels. If room units haven't sold by that date, he believes the consumer will hold off for another year. Cool weather in that region has held down sales somewhat, but he thinks hot weather will bring them up.

Profits, prices, and sales in general for this dealer have been about equal to 1956, it was pointed out. However, Johnston has one big gripe and he let off steam concerning it.

"In my 26 years in the air conditioning business," he declared, "I've never seen the situation so appalling as it is now with the lack of interest and lack of help through dealer channels from the manufacturers!

"Everyone is price crazy! Producers pre-sell air conditioners, forecast a 'big market' and then give us nothing in the way of help. They don't tell us how to compete, how to be good merchandisers. No plan reaches down to the dealer," and Johnston doesn't know "if it gets to the distributor or not."

He posed a query. Why don't the manufacturers give dealers creative ideas? "The customer needs to be sold today. Our primary problem is in sales training. The big stymie is that sales help is pathetic. And we're not getting help from the air conditioner makers.

"The whole situation is just 'dead' at the retail level. All is volume at low prices. Help from the factory is nil!" Johnston avowed.

"Why don't the manufacturers give the dealers some creative ideas and some help? Then there'll be no trouble selling air conditioners!"

In San Diego, Calif., William Peat, purchasing agent for University Heating & Air Conditioning Co., reported that the contracting and engineering firm's residential business thus far is above last year, although he couldn't say exactly how much percentagewise.

Reasons for Higher Volume

Peat attributed the firm's higher volume to advertising and "good work by the sales crew." He pointed out that ads are being run in the local newspapers nearly every day.

Asked about prices and profits, he guessed that the market is more competitive, "which would mean that profits per job would be down slightly."

Pretty "horrible" is the word for room and residential unit sales, said Jack Wadum of the Air Conditioning Div. of the Sidles Co. in Omaha, a distribut-

(Concluded on next page)

NEW
NEW
NEW
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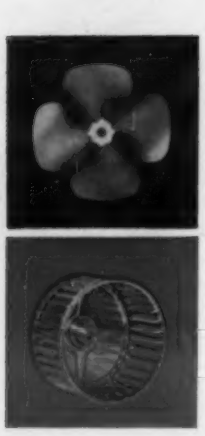
EQUAL
NEWS



It's the *new* Torrington line of Vari-Basic blower units for central heating and air conditioning equipment, now in production at all three Torrington plants. And here is why this important product development is *news*.

1. New quality: Engineering features include the famous Center-Lock Airotor wheel design . . . permanently plastic lubricated Randall bearings, with 3-point suspension . . . and spot-welded heavy steel construction, superbly finished.

2. New flexibility: The units are designed for interchangeability with existing standard equipment, and Torrington's marketing policy makes these components available singly or in combination.

3. New versatility: These units are available in a wide range of sizes designed to provide maximum variability to meet directional-flow requirements.

Your inquiries are invited. For full information, *talk to Torrington!*

THE TORRINGTON MANUFACTURING COMPANY

TORRINGTON, CONNECTICUT • VAN NUYS, CALIFORNIA • OAKVILLE, ONTARIO

For more information about products advertised on this page use Information Center, page 26.

When Weather Breaks 'We'll Be Back In Business'; Residential Work 'Much Improved'

(Concluded from preceding page)

ing firm which also has a retail outlet. He put the finger on the unfavorable weather, explaining that it has been cool and rainy in the area this spring.

Last year, Wadum noted, May and June were the firm's biggest months. "As soon as the weather breaks, we'll be back in business," he said, adding that when and if it does, "July and August will be our biggest months this year."

Wadum said he had checked with other distributors in the area and was told they were experiencing the same sales slump due to the weather. He noted that he had also "talked to Denver and they tell us the same thing."

The company has a lot of proposals out, Wadum stated, but prospects are all "sitting on them" until they see if the weather is going to turn hot or stay cool. If a hot spell develops, "they'll buy," he declared.

Profits Up But 'No Quantity'

As to profits and prices, Wadum said the former were up about 2% at the end of May "but we don't have the quantity to go with it." He figured prices were about 5% higher.

B. F. Rhinefort, a veteran Fort Worth, Texas contractor, reported that his central residential business was "much improved" over last year. He noted that his sales curve has been levelling off due to an increase in combination heating and cooling installations, "eliminating radical ups and downs."

Rhinefort said that about 80% of his current, expanding business is in combination equipment, with 75% of the air conditioning units being air cooled. He also commented that there is an increasing interest in air conditioning among people in the lower wage brackets.

'Fights' for Proper Prices

Asked about profits and prices, Rhinefort replied: "I've never been a low-price contractor." He said he has "always fought" for proper prices, both as an individual contractor and when president of the local air conditioning association. He added: "I won't give my kind of installation at the other man's figures."

Cincinnati Air Conditioning Co.'s central residential business so far this year is down from last year but volume on room and packaged commercial units is "a little bit ahead," according to Charles Van Arsdell, wholesale sales manager for the distributing firm.

He blamed the decline in central residential sales in part on a drop in new builder business. He said the firm had done a "terrific job" in the past in this field but that "builders are trying to build houses for less and are eliminating air conditioning." Also, he stated, new housing starts are down.

But, Van Arsdell declared, the weather is the big factor. He said it's been generally cool this spring in the area. He added, however, that "you can notice the difference immediately when we get a day or two of warm weather. I think that if we get some good hot weather, we won't be able to meet the demand."

Prices and profits are both "down a little" this year, he said.

The point that "the weather is the big factor" was also made by Tom Reedy, of North Town Refrigeration Corp., Chicago contractor, in reporting that his firm's room and residential air conditioning business is considerably below last year—"at least 50% off." He said the decline was about evenly divided between room and residential units.

In addition to the unfavorable weather, Reedy also cited the "uncertainty" existing among people. They have the money but are afraid to spend it, he observed.

Reedy described prices as competitive and said profits are a little below last year at this time.

When asked what he suggested could be done about this situation, Reedy cracked: "You mean besides getting down on our knees and praying for hot weather?"

'Must Capture Public's Imagination To Sell'

He added that people are buying things that are new and different "but we are confined to staid products. We must capture the imagination of the public and then they will buy." Reedy said he believes that through-the-wall residential units such as Frigidaire announced recently is an example of the imagination that's needed.

Don Gabbert, Minneapolis appliance dealer, told the NEWS that he had done a very small business this year in air conditioning but added that "we've had no hot weather yet."

Last year at this time, he remarked, Minneapolis had had some 100° days but this year people are "waiting it out." Generally speaking, he said, there is little need for cooling in the area and people are willing to wait and see if they need it this year.

In response to a question about prices and profits, Gabbert said that there has been strong advertising on low prices to stimulate business.

There's no profit, he asserted, in this type of business transaction.

He had no suggestion to offer on how to meet this problem. He observed, in effect: "That's the way things are. This is what you have to do to get business in this type of situation."

Ed Fahnestock of Fahnestock's, Inc., Wichita, Kan. contractor, reported that his business is behind last year a little due to a cool May. He said prices and profits are about the same as last year, possibly a little lower.

With business "about the same as last year" for most of them, room air conditioner distributors in Atlanta were reported concentrating on a high sales volume "to offset the profit squeeze that's been their recurring nightmare for the past few years."

'Pretty Optimistic'

But most are "pretty optimistic" about this year's market, pinning their hopes on a hot summer, freer-spending customers, more attractive units.

Competition continues stiff and the price picture somewhat erratic, but showing some indications of stabilizing, in the opinion of a few of the distributors. One was quoted as saying that the profit situation "shows no improvement over last year" but another said he thought the dealer profit picture "was improving."

CHASE® extra soft copper refrigeration tube

Even in close, cramped spaces, Chase Copper Refrigeration Tube works easily, bends easily—thanks to its extra-soft temper. Inside and outside surfaces are clean, bright, oxide free. Crimp-sealed ends keep out moisture, dirt and air. Chase copper tube and solder-joint fittings form the finest system in the business!

Chase Copper Refrigeration Tube coils in sizes ⅛" to ¾" are packaged in individual and master cartons. Perfect for storage identification and shipment.

Available in both 50′ and 100′ length coils.

Packed and protected in sturdy, easy-to-handle cartons. 50 or 100 foot coils.

Chase
BRASS & COPPER CO.
SUBSIDIARY OF KENNECOTT COPPER CORPORATION
WATERBURY 20, CONNECTICUT

The Nation's Headquarters for Brass, Copper and Stainless Steel

Atlanta Baltimore Boston Charlotte Chicago Cincinnati Cleveland Dallas Denver Detroit Grand Rapids Houston Indianapolis Kansas City, Mo. Los Angeles Milwaukee Minneapolis Newark New Orleans New York (Maspeth, L.I.) Philadelphia Pittsburgh Providence Rochester St. Louis San Francisco Seattle Waterbury

For more information about products advertised on this page use Information Center, page 26.

Builds Residential Business from Scratch

Quality Product, Neat, Rapid Installation, Good Service Allow Former Lawyer To Pass Up Profitless Jobs

By George M. Hanning

EVANSTON, Ill. — Lawyer Seymour Blum of Chicago saw the light in 1952.

In that year he bought a central air conditioning unit for his new home. So new was the central residential air conditioning idea then that he had to hire his own sheet metal contractor and supervise the installation himself.

His admiring neighbors convinced him that he could be of greater service by supplying them with air conditioning than with legal advice. He could also make more money.

'It's a Slow Month When He Installs Only 50 Units

By the end of that season, he had sold 50 units. He liked the idea and got into air conditioning with both feet. Now, five years later, he considers it a slow month when he sells and installs only 50 units. His current rate of sales is more than 500 units per year.

Blum is president and principal salesman for American Comfort Mfg. Co. here. He buys component parts from various manufacturers and assembles his own packaged air conditioners of 2, 3, and 5-ton capacity.

He designed the cabinet himself, which is now made for him by Airline Div. of Borg-Warner Corp. The refrigeration system is made by Primor Products Div. of Borg-Warner and the compressor by Tecumseh Products Co.

Blum sells a large share of his output direct. But he is currently building up an organization of dealers throughout the Chicago area. Recent appointments are as far afield as Milwaukee and Kalamazoo, Mich.

He not only does his own assembly, but maintains his own sheet metal shop for duct and fitting fabrication.

In this way, Blum declares, he keeps the price of his unit competitive.

"It's not the lowest priced unit on the market," he said, "but it is well under many others.

Few Jobs Are Lost To Price Cutters

"We set our prices according to our costs plus the mark-up we think we should get. Then we sell at that price. If the other fellow wants to sell at a lower price, he can have the job—if price is the only consideration."

Blum, however, hasn't lost enough jobs to bother him. He feels that in addition to the competitive price, his unit offers three important advantages.

One is his use of a 13-in. Brundage blower. This, he claims, solves many installation problems the more conventional smaller blowers won't overcome.

"It is perfect for our average installation of a 3-ton unit, yet it has the extra power needed by most of our more difficult installations," he said.

"The second advantage is a neat, "satisfaction guaranteed" installation. Blum insists that every installation be not only correct from an engineering standpoint, but good looking as well.

"A good neat installation is a powerful selling point to future prospects," he asserted. "If the job doesn't look neat, they impressed, even though it performs perfectly."

This is important to Blum. Since his very first sale he has depended on satisfied customers and their envious neighbors and relatives for business.

"Those first installations," he recalled, "started a never ending chain of sales. These first customers had friends and relatives and some of them wanted air conditioning right away.

"Relatives! I didn't know people had so many relatives. I've installed jobs out on Chicago's south side, as far as you can go, just because my customers had relatives.

Commercial Installations Follow Good Home Jobs

"Once customers are satisfied with the installations in their homes," he continued, "you've got more business for yourself. That's how we've gotten so many commercial jobs. We've made central air conditioning installations in beauty shops, liquor stores, automobile dealerships, and small plants in all parts of Chicago.

"And this business was ours because we first satisfied somebody with a home installation. You'd be surprised how well it works."

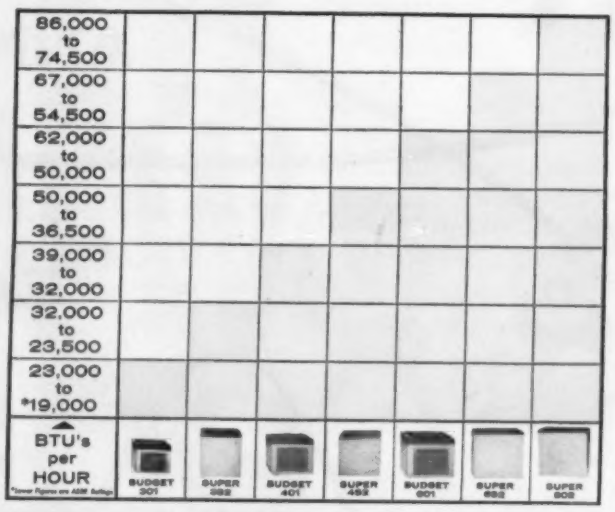
POINTING OUT the 13-in. blower that gives his 3-ton central packaged air conditioner that extra "oomph" is Seymour Blum, president of American Comfort Mfg. Co. He says the bigger blower saves him from many common installation problems.

In earlier years, Blum worked on homeowners exclusively. He believed he could build his business faster and more securely on that basis. Now, however, he is also going after builders.

(Concluded on next page)

Only with Westinghouse Air Conditioning can you—

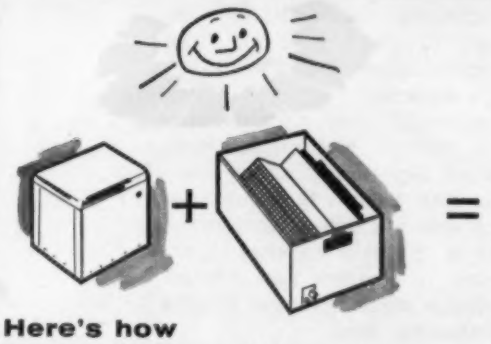
Price, Sell, Profit with



"JUST RIGHT" COOLING MEANS "JUST RIGHT" PRICING! Now, Westinghouse gives you 7 different air cooled condensing units to beat old-fashioned 2, 3, and 5 HP competition! You get a complete cooling range of 19,000 to 86,000 BTU's per hour in Budget and Super air cooled units to beat all price competition!

YOUR ANSWER TO OVER-RATED OR UNDER-CAPACITY COMPETITION. Competitors who *try to sell* all prospects, regardless of need, with only 3 inflexible units are forced to bid a 5 HP price on many 3½ HP jobs . . . or hope that an under-

WHEREVER YOU SELL, YOU CAN MASTER HEAT AND HUMIDITY. If your market is like sweltering St. Louis or bone-dry Tucson . . . you'll have a big edge over competition. You can master *both* the heat and humidity, while you underbid the toughest price competition with "Just Right" air conditioning.



Here's how Westinghouse delivers "Just Right" cooling capacity:

AIR COOLED CONDENSING UNITS. These handsome beige-and-charcoal cabinets house most moving parts—compressor and fan—outside the home. Exhaust air up and away from the house for efficient "*whisper quiet*" cooling. One of these 7 basic units combines with the one best . . .

COOLING COIL. Vertical, horizontal or blower coil unit—available in a complete range of capacities. To give each of your customers . . .

J-80541-A

YOU CAN BE SURE...IF IT'S

For more information about products advertised on this page use Information Center, page 26.

Good Work Brings Good Price--

(Concluded from preceding page)

He has installed 20 units in one project already this year. He considers builders as "plus" business, with the bread and butter still earned from homeowners.

The third advantage he offers is service. He impresses prospects with the fact that he handles one line only—his own. He and his men know their equipment thoroughly and have an adequate stock of replacement parts to back them up. Repairs, if needed, can be made quickly, expertly, and any time of day or night.

Expands Manpower Core During Busy Season

"We haven't had any service problems yet other than normal start-up and cleaning. We have had to replace only one per cent of the more than 2,500 units we have installed since beginning.

Blum has built his organization around a hard core of a dozen men who work for the company full time. But during the busy season, he swells his ranks to 45—or as many as are needed to handle the volume of business.

Where does he get his part-time help? Blum is keeping that secret to himself.

"This is no cake-walk," he declared. "You have to go out and dig for good men. They are available, but you have to look hard."

Once acquired, Blum trains his men carefully on installation. He trains his leaders' installation men the same way.

This is important, Blum believes, not only because he insists on the job being neat, but because a quick, efficient installation plays a large part in keeping the cost of the job down.

Blum claims his crews are capable of installing seven units a day.

While loath to discuss his production line methods, he did say his equipment is not shipped to the job site as a unit. Each component it trucked to the site in its original factory crate and the unit is assembled on the job.

Salesmen are trained, when estimating a job to note any factors that might complicate installation. They also calculate what sheet metal work will be required. Any additional work is figured into the bid, of course.

One-Trip Installations

The needed fittings and ducts are prepared in advance and carried to the job with the equipment. In this way, only one trip is needed to complete the entire installation.

Sometimes, however, despite careful estimating and advance planning, some extra work needs to be done that wasn't in the original bid.

When such cases do arise, Blum doesn't try to charge the customer for it.

"Once you've quoted on a job, stay with your price. Don't beef and don't quibble after the job is installed," he advises.

"We never haggle with the customer. We know that our average installation will more than make up this occasional extra cost.

"Most of all we want a customer who likes his installation from the very first day. A man who likes us will tell his friends, relatives, and neighbors that we installed his unit at a very good price. A man who doesn't like us will never do us any good."

Blum, who got into the central air conditioning business "cold"—without any previous business or merchandising experience—believes that it takes a lot of nerve (vision, if you prefer), some mechanical aptitude, and a lot of common sense to succeed.

"I was lucky," he admits. "I got in when there were few dealers interested in selling central air conditioning, money was easy to get, and people were curious about home cooling.

"It wouldn't be so easy today with tighter money and more intense competition."

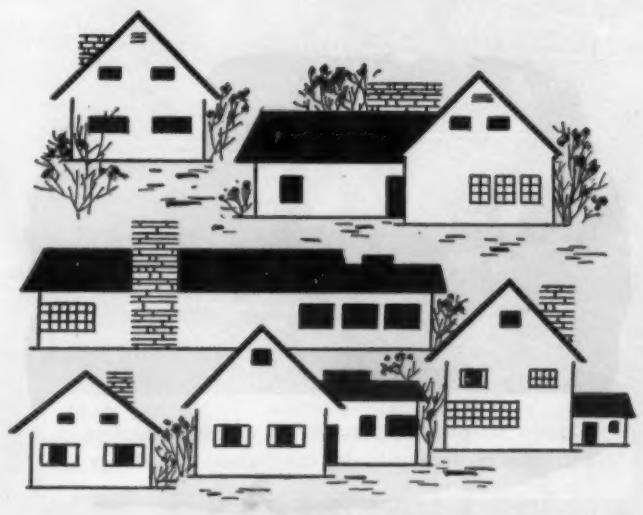
Fiscal Year Beginning June 1 Proves Fortunate

One of Blum's "lucky breaks" was that he got into the business in June. So he naturally set up his fiscal year to begin on June 1.

This proved to be fortunate, he asserts, because its splits his selling season right in two. If a hot summer is followed by a cool spring, or a cool summer is followed by a hot spring, they tend to offset each other, giving him a more even volume over the fiscal year. This also results in a good tax break, he says.

"JUST RIGHT" cooling capacity!

powered unit will not bring complaints. With Westinghouse you have no "*too much or too little*" problems. You can close each sale with cooling capacity that's "Just Right" for the job and you can do it profitably!



THERE'S NO SUCH THING AS AN AVERAGE HOUSE. It's a fact! Cooling requirements differ with each house. Size, style, exposure, local climate, size of family all make a difference. And only with Westinghouse can you install the one unit that is "Just Right" for each home . . . while competitors *try to sell* all prospects with rigid 2, 3 or 5 HP equipment.

COMPLETE HOME COOLING. Maximum comfort throughout the house—24 hours a day during hottest summer weather. Proper mastery of both heat and humidity that only "Just Right" air conditioning can deliver.

Plus Fast delivery, sales training, finance plans, technical aid, local advertising, sales promotion, matching gas and oil-fired furnace line, profits—and more! These are just a few of the reasons why a Westinghouse Franchise is valued as the "Franchise With The Future" by leading dealers and contractors across the nation.

Tune in TV's top dramatic show. . . Westinghouse Studio One.

Westinghouse

AIR CONDITIONING DIVISION • STAUNTON, VIRGINIA

Firm Gets Carrier Award for Home Cooling Improvements

DAYTON — Presentation of Carrier Corp.'s "Century Club" plaque was made to Woodley Construction Co. recently at the Van Cleve hotel.

This award was made "in recognition of Woodley's leadership in the improvement of the American home through air conditioning" stated George Robinson, Carrier residential sales manager.

Woodley Construction has built well over 100 air conditioned homes in its "Corona Park" and "Southview Acres" subdivisions. Plans are now

The presentation was made to Woodley by L. O. Warner, local Carrier distributor. Also in attendance were Tom Wood and Gordon Tooley, vice presidents of the construction company and Thomas H. Murray, wholesale manager of L. O. Warner, Inc.

Air Conditioning Center Offers 'New Concept'

HOUSTON, Texas—The J. R. Hobbs Co. has opened its new Hobbs Air Conditioning Center at 820 North Chimney Rock Rd.

The center "offers a new concept in the marketing of central air conditioning equipment," with its 1,800-sq. ft. display room devoted entirely to central air conditioning. Another feature is a glass-enclosed air conditioner in operation, which forms a display, and a multitude of photographs show different units and methods of installation.

J. R. Hobbs is president of the firm.

American Air Filter Declares 45-Cent Dividend

LOUISVILLE, Ky.—Directors of American Air Filter Co., Inc., recently declared a quarterly dividend of 45 cents per share of common stock.

President W. G. Frank announced the dividend payable July 5 to stockholders on record at the close of business June 19, 1957. Other dividends approved were: 18¾ cents per share on 5% preference stock and $1.75 per share on 7% preferred stock.

For more information about products advertised on this page use Information Center, page 26.

Workinger Named By McQuay

MINNEAPOLIS—R. J. Resch, president of McQuay, Inc., manufacturer of air conditioning, heating, and commercial refrigeration products, announces the appointment of G. G. "Jerry" Workinger as general sales manager.

Workinger

Kenneth R. Lundberg, who has been serving as acting sales manager, has resumed his position as general manager of the McQuay plant at Grenada, Miss.

Workinger is a mechanical engineering graduate of Penn State, and comes to McQuay after 20 years of service with York Div. of Borg-Warner Corp.

Prior to that time, he served in the engineering standards department, and also served as an application engineer for several years at York. Workinger has also been very active in the American Management Association for the past several years.

Open Cooled Plant

ST. LOUIS — Completely air conditioned, the new Prince Gardner factory and offices at 1234 S. Kingshighway Blvd. was formally dedicated recently.

NEW Fedders 1-hp., 7½-amp room air conditioner at left is operating on 115-v. current as Thomas Ford, assistant to the vice president, demonstrates the appliance load on ordinary household circuit.

Fedders 1-Hp. Unit--

(Concluded from Page 1)

ing capacity to meet extra large heat loads, it was noted.

Other features: 360° fingertip control of "draft-free" airflow with cold air stratified 6 ft. up from the floor; easy access to pushbutton controls for "Hi" and "Lo" speed operation; exhausting and ventilating; built-in "Sure-Set" thermostat for positive control of cooling on a calibrated scale; 99.3% power factor; and 9,000 B.t.u.h. of cooling under ARI Standard 110-56.

CLAIM 'MORE B.T.U.'s PER WATT'

Giordano offered a $1,000 challenge to the air conditioning industry guaranteeing that the new model 712S Fedders unit delivers "more B.t.u. per watt than any other window unit on the market, regardless of size or brand."

The new Super-Supreme meets every requirement of the National Electrical Code of the National Board of Fire Underwriters for plug-in appliances wherever it is in effect, Giordano declared.

Full production of model 712S, which is said to effect a large saving in operating costs and eliminate need for wiring alterations in many homes, has begun and shipments will start immediately, according to Giordano's announcement.

Super-Supreme will carry a suggested list price of $369.95, the Fedders president asserted. This, he added, was about $20 higher than the average list price for 1-ton, 12-amp units, but operating savings would in a short time more than offset the higher initial purchase price. "Moreover," he continued, "we intend to bring the price down as soon as mass sales make mass production economies possible."

Thomas Ford, Fedders engineer who demonstrated the new unit, warned against using the same outlet that also powers too many other high-current appliances such as irons and toasters.

RADIO'S TIMER TURNS ON, OFF

However, Ford attached the new room unit to a clock radio, which turned the air conditioner on and off by means of the radio's timer. This is the first one-ton unit that could be automatically controlled by a clock radio timer which takes a maximum of 1,100 w., Ford asserted.

One-ton units drawing 12 amps take 1,200 w. and either blow a fuse or cause both radio and air conditioning unit to stop immediately when joined he continued. He also demonstrated the room unit working out of the same outlet as an iron.

Air handling capacity of Super-Supreme model 712S is 340 c.f.m. on circulation with damper closed, 165 c.f.m. on exhaust, and 140 c.f.m. when ventilating. Filter is a disposable sun glass unit of 156 sq. in. with dimensions of 11⅛ by 14 by ½ in.

The model is said to remove 2.5 pints of moisture per hour. It has 171-lb. net weight. Decorative cabinet is 16¼ by 27 by 2¼ in., outer cabinet 16¼ by 27 by 18 in.

Electro tin-plated brass covers provide effective corrosion protection under the capacitor bushings.

New covers give General Electric Capacitors

EXTRA PROTECTION AGAINST CORROSION

Now electro tin-plated brass covers are available on General Electric's complete line of capacitors for air conditioning units. Combined with Granite-Gray case paint, these new covers give G-E capacitors more than four times the corrosion resistance of the previously used finish.

NEW CORROSION-RESISTANT COVERS provide maximum protection for normally inaccessible areas: under the bushings and at the double roll seam. The electro tin-plated brass covers seal off these "trouble spots" from the harmful effects of corrosive atmospheres.

GRANITE-GRAY PAINT, used on the case of the capacitor, has been life tested in a 20 percent salt fog atmosphere for 1000 hours at 95 degrees Fahrenheit. Test results showed absolutely no indications of corrosion. This durable paint gives longer life for your General Electric capacitors, even under the most adverse climatic conditions.

THE NEW COVER AND CASE PAINT are listed by the Underwriters' Laboratories and are available on all G-E capacitors for air conditioners. For more information about these protective features, contact your nearest General Electric Apparatus Sales Office. Or write for bulletin GEA-5895, "Capacitors for Air Conditioning Equipment." General Electric Co., Section 448-2, Schenectady, N. Y.

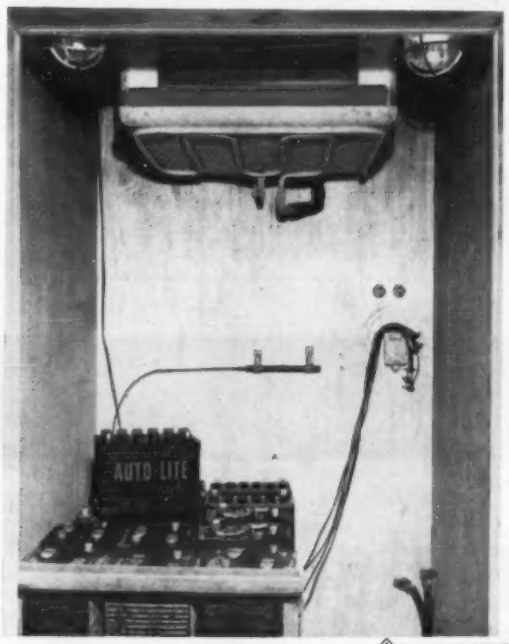
Durable Granite-Gray paint effectively resists corrosion on the capacitor case and at the double roll seam.

Progress Is Our Most Important Product

GENERAL ELECTRIC

For more information about products advertised on this page use Information Center, page 26.

Cascade-Type Environmental Battery Test Chamber Features 'Certain' Defrost



INTERIOR of the test chamber at the Electric Auto-Lite Battery Co., Oakland, Calif., is shown here. Automatic and certain defrosting is a feature of the equipment used for testing batteries for Army Ordnance.

OAKLAND, Calif. — Automatic, certain defrosting for environmental test chamber applications was the basis for specification of equipment recently installed in a battery test chamber at the Electric Auto Lite Battery Co. here.

In the chamber, Auto Lite tests batteries in temperatures ranging from +30 to -75° F. The room outside the test chamber is maintained at 80°.

USE ARMY VIBRATOR TEST

One phase of the low temperature battery test is accomplished with a standard Army Ordnance vibrator designed to shake batteries at the rate of 2,100 cycles per minute. The six normal testing temperatures are: 30, 0, -20, -30, -40, and -65.

The test box itself is 9 ft. high, 7 ft. long, and 6 ft. wide with 10 in. of "Styrofoam" in the walls and 14 in. in the ceiling and floor. The floor, on which the 750-lb. vibrator rests, is isolated from the box.

Specified for this cascade type system was a Recold "Vapomatic" coil (model V-L 948), a Curtis 5-hp. compressor (first stage), and a 3-hp. Curtis (second stage). The system uses Refrigerant-22.

CONTINUOUS HEAT

Recold's V-L 948 is an automatic defrosting coil which incorporates the Vapot through which heat is supplied continuously during the defrost cycle without the use of external heat sources, it was pointed out.

Mark Norberg is chief engineer at the Oakland branch of Auto Lite, which is one of 26 plants in the nation. With headquarters in Toledo, Auto Lite also has two foreign plants.

Contractor for the installation at Auto Lite was Raymond Griss and Jimmy Ward of G. W. Refrigeration in Oakland.

Looking for a Business to Buy . . . ?

Check the Business Opportunities Section in the classified advertising columns.

Multi-Stage Air Source Heat Pump To Condition Large Plant Near Chicago; Lagoons Collect Water To Be Used

CHICAGO—What is claimed to be the largest air source heat pump installation in the country will be installed in the new $2,300,000 Flick-Reedy Corp. plant in the suburban community of Bensenville.

A multiple stage operation, the system is being designed and installed by York Corp. It will cool nearly 220,000 sq. ft. of office and factory space during summer and squeeze heat out of 250,000 c.f.m. of air in winter to keep interior temperatures at 70° F. even at -10° F. outside temperatures.

The new plant, expected to be completed in late fall, will boost productive capacity of Flick-Reedy, already claiming to be the nation's largest producer of industrial hydraulic and air cylinders, by 70%, it was explained.

Rainfall, to be collected in two man-made lagoons, will provide the water needed for the operation of the air conditioning equipment plus other industrial uses. Drainage from 10 acres of roof and parking area will feed the lagoons.

The company plans to stock the lagoons with game fish. The ponds will be used for skating in winter. Each lagoon will be 75 ft. wide, 500 ft. long, and 7 ft. deep. A third lagoon will be used for plant sewerage disposal.

The two lagoons will provide more than 150 g.p.m. of water for industrial use and 60 g.p.m. for cooling. An inch of rain, collected on roof and parking surfaces will raise the lagoon level by 10 in. Normal rainfall is expected to be sufficient to provide all water needed and replace all lost by evaporation, it was added.

The company expects that the heat pump will operate at a lower cost than conventional heating and cooling units of comparable quality. A significant amount of equipment room space will be saved by having the same equipment handle both heating and cooling.

In addition to the heat pump and lagoons, other notable features of the plant include hydraulic levelers for truck docks, a sewage disposal plant, parking areas for nearly 750 cars, and a huge landscaped park for employes.

Tecumseh

engineering VISION

DESIGNS A FULL CAPACITY 2 H.P. COMPRESSOR

that has real economy

Tecumseh can now offer the industry 2 compressors in the 2 H.P. range. The new B21T18 is a full capacity (23,400 BTU) 2 H.P. built on the same general design as the B74T16 (19,500 BTU). Since it is the same basic design, many production advantages were realized, saving cost and eliminating start-up expense. At the same time the customer is assured of an outstanding compressor, thoroughly proven in the field by several million counterparts in the smaller sizes. The customer may now incorporate a full capacity deluxe 2 H.P. model using the B21T18 and a lower capacity 2 H.P. model using the B74T16. Savings in auxiliary equipment will allow the manufacturer to sell the B74T16 model at a lower price.

In addition to these models Tecumseh 1½ H.P. and 1 H.P. compressors round out the line of external spring mount compressors.

Tecumseh engineering and production skills combine to give you the best compressor — most favorably priced — for today's market while geared for tomorrow's as well. You'll do better with Tecumseh.

Model B21T18 — 2 HP — 23,400 BTU
Model B74T16 — 2 HP — 19,500 BTU
TECUMSEH EXTERNAL MOUNT COMPRESSORS
FOR ROOM AIR CONDITIONERS, AND ALL TYPES
OF RESIDENTIAL AIR CONDITIONING
Models
B1516, B1613 — 1 HP
Model
B32P16 — 1½ HP

TECUMSEH

The Leader Serving Leaders in the Air Conditioning and Refrigeration Industries

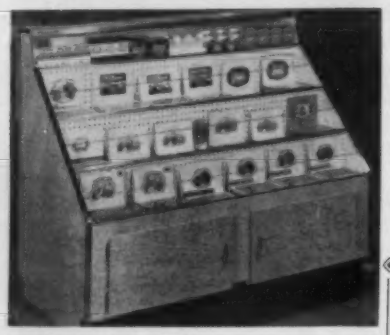
TECUMSEH PRODUCTS COMPANY

MARION, OHIO — TECUMSEH, MICHIGAN

EXPORT DEPT: P. O. Box 2280, 24530 Michigan Ave., W. Dearborn, Michigan

For more information about products advertised on this page use Information Center, page 26.

No Doors on 'Humi-Stor' Cases Which Permit Cigar Display at 65% Humidity



NEW "Humi-Stor" cigar case, just reach-in, made by Zero Cold, Inc., Anaheim, Calif.

ANAHEIM, Calif. — A self-service cigar case completely humidified without any sliding doors or tops to open is manufactured here by Zero Cold, Inc.

"Humi-Stor" cases come in five sizes; 4, 5, 6, 8, and 10-ft. lengths.

A top section holds "five packs" which are packaged cigars. The 5-ft. size has room for 160 of them on display.

Humidification also reaches the storage compartment underneath the case. The 5-ft. Humi-Stor has display space for 21 boxes of cigars, and storage space for another 85 boxes.

An optional feature gives a choice of front opening or back opening storage compartment doors.

An optional extra is a cigarette rack holding 40 packs on the back of the case.

Humi-Stor cases plug into any 115-volt outlet. The easily accessible container needs additional water once a week under normal conditions.

Normal humidistat setting is 65%. When humidity falls below that level, a fan is turned on. It blows across the water pan, distributing moisture throughout the case and restoring the air to the correct humidity.

Hundreds of small air holes in the case allow over-all even distribution of humidified air for both display and inventory stock.

W. H. Dial, sales manager for Zero Cold, says Zero Cold is in volume production.

Veliath Visits Vilter Overseas Distributors

MILWAUKEE—Felix Veliath, assistant export manager of Vilter International, Inc., left recently on an extensive business trip to visit Vilter distributors throughout the world.

"Although his itinery includes stops in Italy and Portugal, he will spend most of his time in the Near and Far East where the use of refrigeration is gaining momentum," it was pointed out. "This is particularly true in regard to the freezing, storage, and icing of foodstuffs.

"During his visits, Veliath will offer technical assistance in the design of certain types of refrigeration plants that will soon come into their own in this area. His eastern tour will include stops at Japan, Phillippine Islands, Hong Kong, Singapore, Thailand, India, Pakistan, Iran, Lebanon, and Egypt."

H. J. Brandeles Dies

UTICA, N. Y. — Herman J. Brandeles, 85, of the H. J. Brandeles Heating Corp., died recently at his home after a long illness.

He was born in Sweden and came to this country in 1889. He later organized his own company.

Carryl To Head Dunham-Bush's Atlanta Office; Cox Opens Birmingham District

WEST HARTFORD, Conn.—Dunham-Bush, Inc. has announced the opening of two new district sales offices.

The company also will maintain a complete inventory of its air conditioning, refrigeration, and heating products and accessories at its Gainesville, Ga. plant.

The southeastern district office is in Atlanta. Frank Carryl will head this office as district manager. Sales engineers working out of the Atlanta headquarters also will maintain offices in Miami and Jacksonville, Fla., Charlotte, N. C., and Knoxville, Tenn.

The district office for the middle southern states is in Birmingham, Ala. Charles F. Cox is district manager. Sales engineers working out of Birmingham will have offices in New Orleans and Memphis.

James A. Mulcahey, vice president in charge of sales, noted that this step has been taken as a result of the recent acquisition by Dunham-Bush of Brunner Mfg. Co.

Dunham-Bush formerly was represented in the southeast by Joe E. Parker Co. of Atlanta.

How G-E motors help

FOR DIRECT-DRIVE ROOM UNITS, (A) permanent-split-capacitor or shaded-pole thru 1/6 hp; FOR DIRECT-DRIVE CENTRAL UNITS, (B, C) perm.-split-cap. thru 1/2 hp; FOR BELT-DRIVE CENTRAL UNITS, (D) cap.-start thru 3/4 hp at 1725 rpm, thru 1 hp at 3450 rpm, and (E) split-phase thru 1/2 hp.

For more information about products advertised on this page use Information Center, page 26.

Hunter 'Cargo Cooler' Designed for 35 to 45° F. Range

SOLON, Ohio—Another new Hunter "Cargo Cooler," the second in the company's recently developed series of "low-cost, high-capacity" mechanical refrigeration systems for truck bodies, has been introduced by Hunter Mfg. Co. here.

Weighing 315 lbs., the compact new model C-10-A is a heavy duty unit especially designed for the maintenance of temperatures for products in the 35-45° F. range. Capacity-wise this model can be employed in adequately insulated bodies up to 18 ft. long, it was said.

HUNTER Cargo Cooler (Model C-10-A) is designed for temperatures ranging from 35 to 45° F. It is shown here installed in demonstration truck.

Powered directly by the truck engine, the model C-10-A consists of a self-contained "factory package" that contains all components, except the compressor. This package is designed for mounting through a prepared opening in the upper front wall of the truck body.

The high speed automotive compressor mounts on and is driven by the truck engine, by a V-belt from the crankshaft.

"This design allows the entire system to be charged and run-in tested at the factory, disconnected for shipment, then reconnected after installation without the loss of refrigerant or the inclusion of air in the system," it was stated.

Temperature is controlled by a thermostatic switch that stops and/or starts the engine-driven compressor by means of an automatic magnetic clutch pulley mounted on the compressor shaft. Capacity control of the variable speed compressor is by means of a by-pass valve that is responsive to low side or evaporator pressure. As the compressor speed reaches the point where capacity control is needed, this valve by-passes just enough discharge gas into the evaporator coil to maintain the system in balance, the firm pointed out.

"Evaporator and condenser fans are powered by individual 12-volt d.c. fan motors with heavy duty ball bearings and replaceable brushes. These motors operate from the truck generator.

"Both motors cycle off when the desired temperature is reached. In addition, the condenser fan motor operates only when needed to maintain normal head pressure.

"At normal engine idling speed, when the generator output is low, both fans cycle off thereby preventing drain on the battery. A manual 'on-off' switch is supplied on the unit so that when refrigeration is not required it can be turned off.

"Mounting brackets and drive belts, for mounting and driving the compressor on the truck engine, are available for all popular makes of trucks and are included in the price of the unit.

All-Electric Truck Unit Boosts Payload Capacity 100%

SCHENECTADY, N. Y.—A 100% increase in payload capacity through use of a new all-electric truck refrigeration unit has been reported by Triple R. Poultry Farm, according to General Electric Co. here.

First truck to be converted to the new system is now able to handle over 45,000 eggs per week. The poultry farm produces, buys, and sells eggs to

Owners Hans, Walter, and Lena Rosenstock say that the all-electric system provides constant temperature regardless of engine speeds, and allows a 100% increase in deliveries.

"Formerly, we took advantage of the cool morning air to load and deliver eggs," they stated. "Now, with plug-in operation and the extra capacity, one truck can be loaded during the night to make the early morning delivery, and also another delivery in the hot afternoon."

It is designed to operate at full capacity off the crankshaft even when the truck engine is idling. For continuous refrigeration during off-delivery hours, the system can be plugged into any a.c. outlet at the loading platform, saving fuel and engine wear, it was pointed out.

The package electrical drive is built by General Electric.

simplify your design problems

G-E motors tailored to your air conditioner and produced on schedule help you develop and market new products faster!

General Electric "Form G" fractional-horsepower motors can help you improve the design of your new air conditioning units and get them into production faster because:

1. **THE RIGHT MOTOR** is available from General Electric *now!* The motors at left are typical of the complete line of General Electric motors designed specifically for the high power factor and efficiency you want. If you require modifications to solve a specific design problem. . .

2. **GENERAL ELECTRIC APPLICATION ENGINEERS** are ready to help you get the best motor for your product, commensurate with performance and cost requirements. And. . .

3. **ON-SCHEDULE DELIVERY** of General Electric motors helps get your new product into production without delay. As for quality. . .

4. **"YEARS-AHEAD" G-E DESIGN** has been proved by the outstanding record of millions of motors put in use since G.E. pioneered in the design of smaller, lighter motors five years ago. You get more dependable motor service and greater customer satisfaction from such G-E features as: a bearing system that needs no re-oiling for summer cooling use; an insulation system of Formex* wire, Glyptal* alkyd-resin, and Mylar† polyester film that is virtually unaffected by moisture and humidity.

You can simplify assembly, too, with such features as the "quick-connect" terminal board and "clip-on" terminals which speed hook-up.

These are only a few of the many G-E motor benefits that will help to keep your new design program on schedule, and improve your product as well. If you'd like to get help on a specific problem, contact your nearby G-E Apparatus Sales Office. For more information on "years-ahead" G-E motors, write for Bulletin GEA-6424. General Electric Co., Sect. 702-56, Schenectady 5, New York.

*Reg. trade-mark of General Electric Co.

†Reg. trade-mark of DuPont Co.

GENERAL ELECTRIC

APPLICATION HELP from G-E engineers familiar with your problems assures you of the best motor for your requirements.

ON-SCHEDULE DELIVERY of the motors you need is the result of General Electric's flexible, multi-plant manufacturing facilities.

LOCAL SERVICE is provided by G.E.'s nationwide network of Small Motor Service Stations—listed in the "yellow pages."

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

Indiana newspaper related the sad tale of a farmer and the new Indiana turnpike.

This limited access highway bisects his farm between his house and barn. By state law privies must be adjacent to barns, not homes.

So this poor fellow has to walk three miles to the nearest entrance, pay toll, then walk back three miles again while he awaits installation of plumbing fixtures.

Winston Churchill on Long Life

Sir Winston Churchill proudly gave his formula for his good health—after severe illness and a momentous life—on his 81st birthday.

"A lot of drinking, a lot of eating, and eight or nine hours of sleep, most of it in the daytime."

Advice from a Taxi Driver

David Williamson, driver of a Detroit cab-for-hire, declares that these are among the better methods of getting taxicab jockeys to hate you:

(1) Telephone for a cab from your office. Take the elevator downstairs, dash out on the sidewalk, and hail the first taxi that comes by. You'll have fun thinking what an awful time your victim is having, battling rush-hour traffic in his empty cab searching for YOU.

(2) If you call a cab from home, wait until the driver is at the door before looking for your coat, cigarets, lighter, and saying goodby to your family.

(3) When you get into the cab, be mysterious about your destination. You be the skipper. Tell the driver "just head south" and then badger him with surprise "right" and "left" commands. (Give these in the middle of intersections.)

(4) Always shout: "And hurry!" when you state your destination.

(5) If you're taking a cab in the heavy-traffic hours, do ask the driver what he thinks of the Suez crisis, Marilyn Monroe, Elvis Presley, and the baseball races.

(6) Carry only 10 or 20 dollar bills, especially for short hauls.

(7) Try to establish if driver is a Republican or a Democrat. (You'll enjoy the way he squirms. . . . Should he blow the tip or tell the truth?)

(8) Give the driver a vivid account of your career as a halfback at old Siwash U back in 1937. . . . Fill him in on how you closed the big deal with Aramnox this afternoon. . . . Do your best to bore hell out of him.

(9) Tip him 15 cents—or a quarter on a long run.

P.S. Wanna get a door slammed on your finger?

TV Troubles

Silvery-thatched Art Baker, emcee of the "You Asked for It" television series, reveals that the viewer-contributor format of his show isn't as simple and foolproof as one might believe.

"We do get an average of 1,500 letters a week asking for various features. But," he footnotes, "if three of those requests are practical, we're lucky. The problem is that many people have specialized interests. An engineer, for example, might ask to see something highly complicated which would be of no interest to a housewife or the man on the street.

"Also we find an unhealthy influence among children. Youngsters write for the most gruesome things—like wanting to see a man hanged, or to see two trains crash into each other at 100 miles an hour."

What Price Glory?

Radio's "Justice Colt" took quite a beating at an "open house" staged by radio station CKLW. Hordes of youngsters crowded around him to get autographs, tore at his clothes, and finally got his goat.

Last straw: a boy knocked off his 10-gallon hat.

"Pick up that hat," thundered the radio serial hero, "and put it back on my head."

The boy did as told. When "Justice Colt" bent over to receive the hat, another boy kicked him in the rear end.

Another Illusion Shattered

Believe in old adages? Prepare to be disillusioned.

Hollywood electrician Andy Tweiss, who arranged an electrical storm movie sequence, miscalculated. An artificial "lightning" bolt jolted him mildly—in the seat of his pants.

While trying to readjust his "lightning-maker" machine, it hit him again in the identical spot. Thus lightning struck Tweiss in the same place.

Hooray for the Hoosiers!

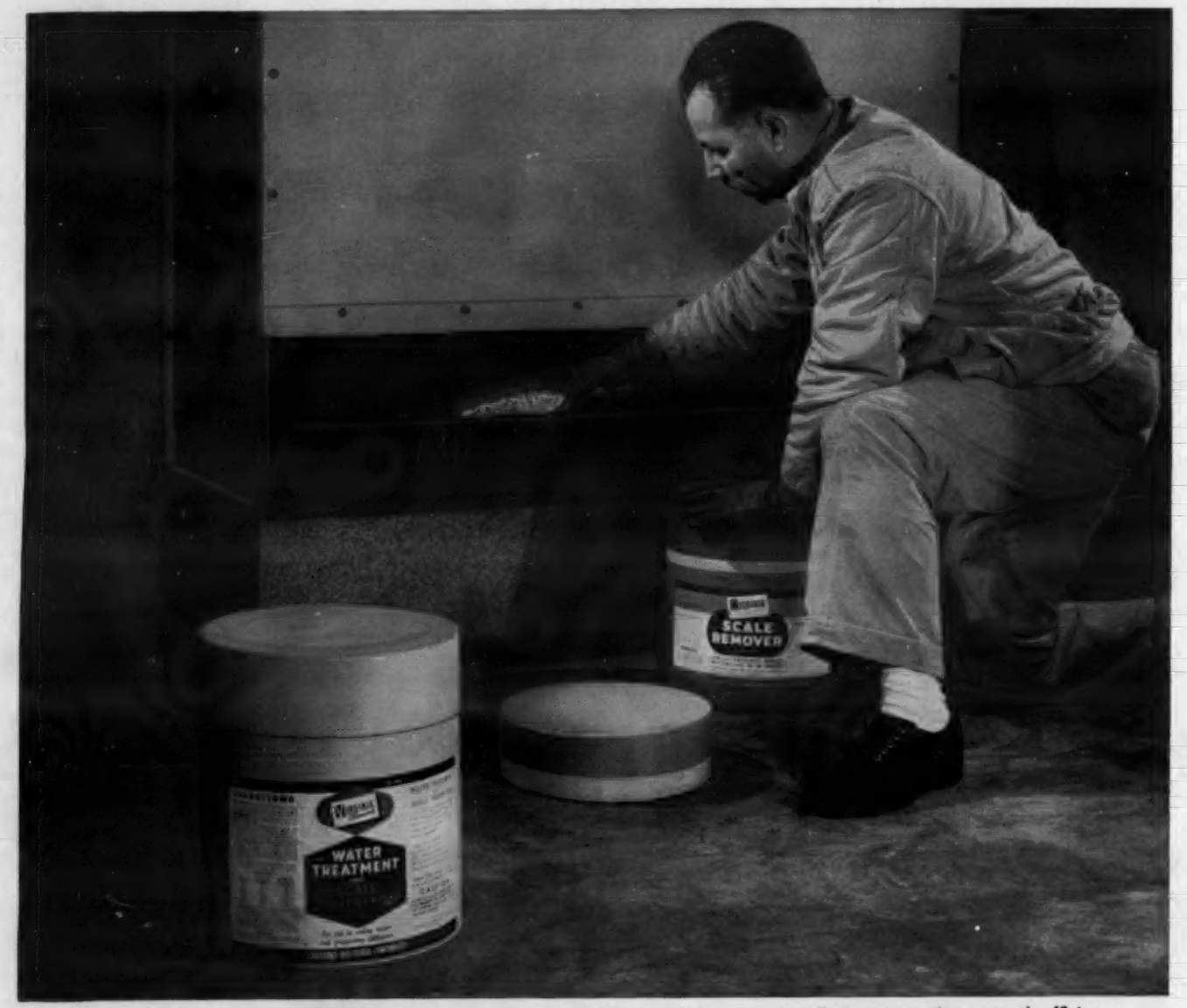
Perhaps the most serious indictment of the federal tax system ever voiced by any governmental body has emerged from the Indiana Legislature. Replete with such terms as "invention of Socialist Karl Marx, "tax octopus," "confiscation of income," and "confiscation of property as well," a measure known as House Concurrent Resolution No. 16 was approved both by Indiana's House and Senate in one day.

The resolution charges that high progressive federal tax rates have made it "virtually impossible" to accumulate venture capital; have "destroyed" the incentive for people to invest in new and untried business ventures.

High rates are causing many taxpayers to feel they have "moral justification for evasion" thereby encouraging dishonesty and making the equitable collection of taxes "impossible," the resolution bristles.

A Republican, David W. Dennis of Richmond and a Democrat, Walter H. Maehling of Terre Haute, sponsored the resolution jointly. The resolution concluded with a demand for substantial reduction of income taxes, tax relief for small corporations, drastic cuts in state and gift taxes, and removal of inequities from excise taxes.

Any arguments?



"Virginia" Water Treatment Chemicals help keep air conditioning and refrigeration installations operating at peak efficiency

"We found ourselves faced with increasing problems of scaling of condensers"

The increased use of water saving devices is creating a scaling problem for equipment servicing firms all over the country. The complaint above came to us in a letter from Archie L. Robertson, Service Manager of the Allied Equipment Co., Minneapolis, Minn.

Mr. Robertson then goes on to say that after using "many brands of chemicals and compounds for cleaning these systems without getting results," he began using "Virginia" Scale Remover and was delighted with the performance. "We congratulate you on a very fine product."

Like many other equipment service managers, Mr. Robertson found that once old scale was removed, "Virginia" Scale Inhibitor prevented formation of new scale. You, too, will be pleased with the way "Virginia" Scale Remover and Scale Inhibitor restore and maintain maximum heat transfer for peak operating efficiency.

Ask your supplier about "Virginia's" other Water Treatment Chemicals: "Virginia" Algae-Cides No. 1 and No. 2, and "Virginia" Ice Machine Cleaner. Or write Refrigeration Division, VIRGINIA SMELTING CO., 177 Jefferson St., West Norfolk, Va.

VIRGINIA® Chemicals

ESOTOO • KINETIC CHEMICAL'S "FREON" REFRIGERANTS • V-METH-L CAN-O-GAS • PERMAGUM • PRESSTITE TAPE • KWIKWRAP SUNISO REFRIGERATION OILS • WATER TREATMENT CHEMICALS

Available in Canada and many other countries

Amco

CONDENSATE PUMPS

★ 20 FT. HEAD
★ FLOAT CONTROL
★ QUIET-HEAVY CONSTRUCTION
★ PLUG IN PRE-WIRED

AMERICAN COMFORT MFG. CO.
2401 MAIN ST. EVANSTON, ILL.

For more information about products advertised on this page use Information Center, page 26.

TV Show Nets Dealer Room Unit Leads

PHILADELPHIA — A new Philco "Bantam" air conditioner was installed in two minutes by Mort Farr on his weekly 15-minute TV program.

Right after the show, Farr and a salesman took nearly 150 telephone calls, resulting in many leads, he said, in spite of the cold damp weather.

During the program, Farr, an Upper Darby, Pa. dealer and board chairman of the National Appliance & Radio-TV Dealers Association, uncrated the small air conditioner and mounted the unit in the window before the camera.

Window brackets and the necessary bolts had been installed prior to the show but the demonstration did include opening the carton and installing the filler and a gasket.

After the job was completed Farr plugged the unit in and demonstrated with his handkerchief the breeze that poured forth.

Sees 100 Cities Under Room Unit Leasing Plan

PHILADELPHIA — By the end of 1957, it is expected that 100 cities will have the air conditioner leasing service offered by Leasing Corp. of America, according to Herbert B. Wolf, president.

As previously reported, the five-year-old Philadelphia company, which specializes in leasing RCA Whirlpool air conditioners to such customers as motels, hotels, and office buildings, is expanding its activities to a nationwide basis.

Under the LCA Rental Plan, customers sign a lease for two, three, or five years. Included in a fixed monthly charge, which varies according to installation, are any required wiring, window or building modifications, as well as complete maintenance of the air conditioners.

Air conditioning lease orders are sent by LCA representatives to Philadelphia headquarters. RCA Whirlpool air conditioners are then procured from the distributor in whose territory the installation is to be made.

Kuwait Orders 1,200 Room Conditioners

CHICAGO—What is claimed to be "the largest single order of room air conditioners ever sold to a foreign country" has been shipped to the Shiekdom of Kuwait, announced J. W. Alsdorf, president of Mitchell Mfg. Co.

The order for more than 1,200 Mitchell 2-hp. "Roto Cone" units was placed by the Dept. of Electricity for the Government of Kuwait, which is situated in the northeast part of Arabia on the Persian Gulf.

The punishing heat loads on the Persian Gulf of Arabia require a room air conditioner to operate under outside ambient temperatures up to 125° F. dry bulb, it was pointed out. Alsdorf said the Roto Cone unit complied with this specification and other requirements set up by the Dept. of Electricity of Kuwait.

Straw Hats, Giveaways Spark 3-Day 'Coolerama' Air Conditioning Drive

ATLANTA — Davison-Paxon Co., large Atlanta department store, reported heavy traffic was attracted by its "Coolerama" promotion, co-sponsored by Westinghouse Electric Corp.

Nelson Abbott, sales and merchandise manager, and Woody Wiseman, both of the air conditioning division of Westinghouse at Springfield, Mass., assisted in the three-day promotion.

The event was kicked off by a double-page ad in the afternoon *Atlanta Journal* and the following morning the store's air conditioning department was filled with customers.

A large part of the store's appliance department was given over to special displays of air conditioning. An "auditorium" complete with stage for entertainment and chairs for spectators was arranged along one side wall. A choice window, fronting on Peachtree St. was also devoted to the product, according to reports.

Salesmen wore striped jackets, straw hats, string ties, and carried canes. Other novel features were giveaways consisting of balloons and lollypops for the kiddies, soft drinks and perfume for the ladies. Several large door prizes were given away, including one 2-hp. central unit installed free, and two deluxe 1-hp. window units. All air conditioning units sold during opening day were installed free of charge.

Cartoon Pushes Extra Home Room Units

"IS YOUR home a 'one-room riot?' Family crowded around that one room air conditioner?" These words open a new animated-cartoon film commercial for O. A. Sutton Corp. available to "Vornado" dealers in about 40 local markets. The 45-second film provides 15 additional seconds for local dealer name and address. It features the "Vornado Thin Man" who demonstrates the "Twin Thin" portable air conditioner.

Over 78,000 View Nashville Electric Show

NASHVILLE, Tenn. — The 1957 "Big Top" Electric Show, held here recently, drew attendance of 78,500 for the five nights it was on, according to William D. Hall, sales promotion manager of the Nashville Electric Service, the sponsoring utility.

Exhibitors' reports indicate that the crowd was more interested this year in air conditiontiong, built-in appliances, and other applicances, Hall further explained.

You're Covered Completely

because A-P keeps an eye on everything that goes on in the refrigeration industry!

MODEL 205C — adjustable superheat. R-12 R22, Methyl. Capacity: 2 and 3 tons R12.
MODEL 206C — fixed superheat. R12, R22 or Methyl. Capacity: ¼ thru 1½ ton R12.
MODEL 207C and 207D — adjustable superheat. Internally equalized. Small size — easy to install. Capacity: ¼ thru 3 ton R12; ⅛ thru 5 ton R22; ½, 1, and 2 ton Methyl Chloride.
MODEL 209 — adjustable pressure limit and superheat. R12, R22 or Methyl. ¼, ½, 1, 1½ tons R12.
THERMOSTATIC EXPANSION VALVES
MODEL 214 adjustable superheat 1, 2, 3 tons R12. 2, 3, 5 tons R22. Std. or M.O.P. charges.
MODEL 217 — adjustable superheat. Solder connections. 5 to 12.5 tons R12; 7½ to 19 tons R22. Std. or M.O.P. charges.
MODEL 218 — adjustable superheat. R12 (16, 19, 25 tons). R22 (25, 30, 40 tons). Std. or pressure limiting charges.
MODEL 104D — open-type adjustment. Solder connections. R12, R22, Methyl and Sulphur. Capacity: ½ ton R12.
MODEL 204C — with graduated pressure scale. R12, R22, Methyl or Sulphur. Capacity: ½ ton R12.
THERMOSTATIC EXPANSION VALVES
AUTOMATIC EXPANSION VALVES
MODEL 304C — R12, R22, Methyl and Sulphur. Capacity: 1 ton R12.
MODEL 408 — Trap-It. 3 sizes. Connections ¼ to ⅝" SAE.
MODEL 410 — Trap-Dri. 5 sizes Connections ¼ to ⅝" SAE, ¼ O.D. to 1⅛" O.D. Solder.
MODEL 238 — evaporator pressure regulator. All non-corrosive refrigerants. Capacity: 1 ton R12.
MODEL 235S — evaporator pressure regulator. R12, R22, Methyl & Sulphur. 2 adjustment ranges.
AUTO. EXPANSION
FILTERS and DRIERS
REGULATING VALVES
MODEL 239 — Pressure regulator. Two adj. ranges: 40-140 and 80-210 psig. All non-corrosive refrigerants.
MODEL 237 — crankcase pressure regulator. Adjustable 0-40 psi. 2 cap. ranges. 1½ & 3 tons nom. R12.
MODEL 65 — for all non-corrosive refrigerants. Sizes: ⅜, ½ and ⅝" female N.P.T. sliding seat (65 to 200 psi, 165 to 300 psi ranges); 1 and 1¼" double ceramic seat (70 to 170 psi, 160 to 240 psi ranges).
MODEL 73 — multi-purpose. Three orifice sizes, four body styles.
MODEL 67 — sweat or pipe top connections. All-purpose. Soft, or metal-to-metal seat.
REGULATING VALVES
SOLENOID VALVES
MODEL 270 — refrigerant. Suitable for hot-gas defrost. ⅜ or ½" orifice.
MODEL 70NAX — refrigerant. Pilot operated, 9/16" orifice.
MODEL 70N — refrigerant. Large capacity. Pilot operated, 1" orifice.
FLARE TYPE — ½ or ⅝" flare-nut. ½, 1, 1½, 2 and 3 tons capacity, R12. Up to 6 — ¼" O.D. outlets.
SOLDER TYPE — for Models 214E, 216CE, and 217E and 218E TXV's and gen. service. ⅝" O.D. thru 1⅛" O.D. Any number and size of outlets. Capacity thru 40 tons, R12.
SOLENOID VALVES
DISTRIBUTORS

CONTROLS COMPANY OF AMERICA

Manufacturers of A-P CONTROLS

2460 N. 32nd Street, Milwaukee 45, Wis.

Controls That Make Modern Living Possible

If you don't see what you want here, ask your jobber — or write for latest, complete-line catalog . . . NOW.

Is 'Comfort Engineering' Key To Real Boom In Residential Conditioning?

Could Slash First & Operating Costs, Shift Sales Pattern, Consultant Says

This is the second instalment of a two-part discussion of 'Comfort Engineering' by Tyler S. Rogers, technical consultant to Owens-Corning Fiberglas Corp. The first four of his 10 reasons why equipment manufacturers would benefit from adoption of comfort engineering standards appeared in the first instalment.

"(5) Here is another important advantage of comfort engineering to the industry: Maximum use of insulation, with some care for window shading and ventilation, will reduce the number of misfits in the installed capacities of heating and cooling units.

Less Figuring To Do

"If 50,000 B.t.u. output heaters and 30,000 B.t.u. capacity cooling units can take care of 60% of your market, it is obvious that your salesmen and installation men will have less figuring to do and will give their customers satisfactory performance more frequently," Rogers predicted.

"(6) This in turn suggests a design opportunity of some merit. If today you try to design a combination unit, or companion units, for heating and cooling, you face a difficult air delivery problem. Houses insulated only to FHA minimums have heating loads ranging from 1.3 to 2.5 times the heat gain.

"The same houses when comfort engineered, show heating loads 2 to 3 times cooling loads. The ideal ratio is a heating load 3.4 times the cooling load so that the blower can deliver the same c.f.m. for heating and cooling. In other words, insulation helps reduce this design problem.

Design Practices

"(7) While on the subject of design improvements let me suggest three others growing out of good design practices:

"(a) A comfort engineered house is inherently draft-free except where excessively large glass areas are used. Therefore, you can simplify your distribution system with less likelihood of reducing comfort levels than with poorly insulated houses.

"(b) A comfort engineered house is nearly air and vapor-tight. In winter this means higher accumulations of domestically generated water vapor (from bathing, cooking, laundering, floor washing, etc.) and greater need for ventilation to prevent troublesome condensation. You can solve several problems if you will provide a fresh air intake in your cold air return system, adequate to make up for all air consumed in combusion plus air discharged by fans from kitchens, laundries, and baths," Rogers suggested.

"(c) Comfort engineering practices tend to shield the modern home from outside noises, but correspondingly make indoor equipment noises more troublesome. It is my personal opinion that, like the outboard motor people who are proudly advertising the quietness of their once objectional machines, you who can make truly quiet heating and cooling units have a lush market ahead.

"(8) My next point is for the production man. Comfort engineering bunches your unit capacities into smaller ranges, with more units in each group. That is the customary formula for developing production economies. But it also suggests simplified blower capacities for summer and winter air delivery. This means simplified duct systems and installations. And one of my associates suggested that possibly two compressor sizes with a somewhat wider choice of condenser and motor capacities would give you a highly flexible line of cooling units at minimum production cost," he said.

"(9) Earlier I predicted that comfort engineering may be the long-missing key to the potentially tremendous market for central air conditioning systems for the average home. The principal obstacles to this market in the past have, in my opinion, been these:

3 Obstacles

"(a) Initial installation costs have been too high or units sized so low as to perform inadequately; mostly because the estimate has been made without thought of insulating the house as a prerequisite. In consequence, bids have been based on 3-ton and 5-ton units at corresponding prices of those units.

"(b) Operating costs have been too high. Some homeowners using popular window units of inadequate capacity and drafty performance, have been shocked at the jumps in their electric power bills. So they erroneously conclude that a central system would be even more expensive to operate.

"(c) The 'comfort' provided by poorly engineered air conditioning in stores, theaters, trains, and some houses has been far below standard. Window units are great offenders to many persons sensitive to drafts. Our industry, in effect, has promised comfort but has only delivered mechanical gadgets of uncertain or inadequate performance," Rogers asserted.

"Comfort engineering corrects these major faults and thus can open up this market if we use it wisely. It lowers initial costs, lowers operating costs, diminishes the risks of inadequate engineering of the installation, and provides a standard of comfort that cannot possibly be achieved by any short-cut methods," he declared.

"(10) Sales managers will see, I am sure, the larger markets that are inherent in lower prices, fewer models, improved features, more flexible lines, and the enormous sales opportunities that await the successful opening of the huge central air conditioning market for modest houses.

"In this connection, I recently checked this map published in 1946 by the General Services Administration which was intended to guide Federal agencies

(Concluded on next page)

another secret of Lennox success:

LENNOX Dealers Direct Factory

As a result LENNOX *Dealers*

1. Get faster shipments
2. Enjoy special credit, financing service
3. Get EXTRA discounts to boost margin
4. Have extra sales, service and planning assistance direct from factory
5. Have fewer "headaches" in every way

AN EXAMPLE OF BENEFIT FROM THIS DIRECT RELATIONSHIP

BUILDER'S PROMOTION

Lennox discovered the importance of the "Woman's Touch" in home building. And—to help Lennox dealers get *more* of the new home business—an excitingly new promotional program was developed. Typical of the support Lennox dealers get!

For more information about products advertised on this page use Information Center, page 26.

'Comfort Engineering'--

(Concluded from preceding page)

with respect to the climatic areas justifying the installation of air conditioning equipment.

Findings

Here is what I found:

"(a) In Zone A where the effective temperature is 84° F. and above, the industry built 30% of its houses in 1955.

"(b) In Zone B, where effective temperatures range between 80° F. and 84° F., builders erected 49% of these new houses.

"(c) In Zone C where lower effective temperatures indicate that natural wind movement may produce sufficient comfort to make air conditioning difficult to sell, the industry built only 21% of the new houses.

"That means our potential residential air conditioning market is substantially 80% of all new houses! We ought to be happy with that knowledge, but unhappy that we haven't yet made a real dent in this market," Rogers said.

"Why is it that General Motors is said to have sold more air conditioned automobiles than its subsidiary, Frigidaire, sold residential air conditioning units last year? Why will people pay $300 to $800 to cool their automobile before they will invest as much in a cool home? The car unit must be paid off in three years; the home unit can be financed over a 20-year life if accepted as part of the house. Why will people buy higher priced cars with automatic windows, seats, transmissions, and headlights before they will upgrade their homes?

"Partly, I think, because of the high salesmanship of the automotive industry. And partly, I believe, because these higher priced cars with their convenience gadgets give people something more than just what they need. They are quieter, more luxurious, more powerful, smoother in operation, more colorful, more beautiful. Owners take great pride in them," Rogers suggested.

'Upgrade Products'

"Surely all of us in the heating and air conditioning industry can do as well. We can sell better. We can upgrade our products and increase their use. We can offer better performance, better comfort, better 'mileage per gallon' or lower operating costs by working together. We can do lots of things once we stop cutting down on quality to get a competitive price and start improving performance to earn a higher price," the consultant further indicated.

"One final point: It may be untactful of me to mention before this group the inroads electric heating is making in the residential market. Robert H. Emerick, consulting mechanical engineer, in *Progressive Architecture* for March, 1957 presented an unbiased evaluation of electric heating costs for a Long Island house having a computed heat loss of 100,000 B.t.u.h.

"Heating costs were calculated to be $130 for coal, $177 for oil, $186 for natural gas, and $623 for electricity. Thus this new 'fuel' costs more than three times the cost of the most expensive traditional fuel," Rogers commented.

"But if selling more insulation is good for the electric heating industry, just to bring operating costs within reach of homeowners, why isn't it equally good business to use it with conventional fuels and save the waste of these limited natural resources?

"Here is what Emerick said of the electric heating claim that by proper insulation the owner can cut his heating loads in half: 'This sort of economy treatment,' he pointed out, 'will reduce the heating bills regardless of the fuels, consequently the spread between electric heating and the other forms remains unfavorable to the former.'"

Union Carbide Names Hulten Manager of Fluorocarbon Sales

NEW YORK CITY—John R. Hulten has been appointed manager of fluorocarbon sales, Union Carbide Chemicals Co., Div. of Union Carbide Corp., it was announced by John A. Field, vice president of the company.

J. R. Hulten

Hulten will be responsible for establishing an organization capable of serving both the refrigerant and aerosol propellant industries.

In February, Union Carbide Chemicals announced plans to build a unit at Institute, W. Va. to produce 50 million pounds of fluorocarbons annually. The new unit is expected to be in operation before the end of 1958.

"The company's entry into the fluorocarbons field is based upon a realization of the many possibilities of fluorine chemistry in plastics, lubricants, agricultural chemicals, and surface-active agents, as well as the growing use of air conditioners and refrigerating units and the expanding use of aerosol propellants," the announcement stated. "These are the areas in which Hulten will concentrate his efforts."

Hulten received the degree of Bachelor of Science in chemical engineering at the University of Wisconsin in 1941. In July, 1941, he joined Union Carbide's fellowship at Mellon Institute of Industrial Research, and has been with the company since then, except for three years' service in the U. S. Navy.

Hulten has been employed in the Sales Dept. of Union Carbide Chemicals as technical representative, district manager of the Albany district, district manager of the Philadelphia district, and since February, 1956, as central division manager.

In his new capacity, Hulten will make his headquarters at the company's main office in New York City.

To Build Air Conditioned Shopping Center In La.

NEW ORLEANS — Johness Realty Co., Inc., developer, said construction will start in about 60 days on a new shopping center in Carolyn Park in St. Bernard parish. The six-store, $450,000 center will have 90,000 sq. ft. and will be air conditioned.

Firm Opens Branch

ROANOKE, Va. — Southern Refrigeration Corp., refrigeration and heating supplies wholesaler here, has announced the opening of a new branch store in Lynchburg, Va.

Profit from Relationship

BECAUSE THERE IS NO MIDDLE MAN

(No Distributor or Jobber)

YOU ARE THE IMPORTANT ONE!

Point your car in any direction—head for any town, any place and take a look at the Lennox dealer's show room. Chances are you'll see enough that you'll know he's both progressive and in the habit of making good money.

One of the reasons he IS consistently in a leading position is that he's on the team with the folks at the factory. He's not an account number on a jobber's books—and he's not buying home comfort equipment from a salesman who has "other fish to fry." He's the *Comfort Craftsman* in his community!

Would you like to be a COMFORT CRAFTSMAN?

Only Lennox dealers—adhering to highest standards of installation and service practices—qualify as *Comfort Craftsmen.* They merit this position of esteem; and Lennox is spending a vast sum of money to tell your customers about the local *Comfort Craftsman.*

LENNOX comfort craftsman

LENNOX Industries Inc.

Established 1895

Marshalltown, Iowa • Columbus, Ohio • Syracuse, N.Y. • Fort Worth, Texas
Salt Lake City, Utah • Los Angeles, Calif. • Decatur, Georgia • Des Moines, Iowa
Lennox Industries (Canada) Ltd.—Toronto, Montreal, Calgary and Vancouver

For more information about products advertised on this page use Information Center, page 26.

Why Capillary Tubes?

Carrier Engineer Outlines Advantages, Reviews Design and (Few) Service Problems

CLEVELAND — Use of the capillary tube as a refrigerant "expansion device" for room air conditioners, freezers, and domestic refrigerators was reviewed by Edward P. Mikol, senior research engineer, Carrier Corp., at the second technical conference held here by the National Warm Air Heating & Air Conditioning Association.

Excerpts from Mikol's presentation follow:

"The expansion device is one part of the control system for the refrigeration unit. In usual practice, a simple 'on-off' thermostat controls the 'on time' of the refrigeration unit to maintain a desired temperature at the thermostat sensing element. Once the unit is on, the expansion device plays an important part in maintaining balance of operation of the refrigeration unit.

Summarizes Functions

"The functions of the expansion device may now be summarized as being:

"1. To provide a restriction for refrigerant expansion between condenser (the high side) and evaporator (the low side).

"2. To meter the flow of refrigerant.

"The capilliary tube is not necessarily the most ideal expansion device that can be conceived, but it possesses important attributes, which are:

"1. Simplicity—a length of small bore tubing soldered into the liquid line between condenser and evaporator.

"2. Trouble-free—it has no moving parts.

"3. Provides automatic unloading on 'off' cycle.

"4. Inexpensive.

"For all its simplicity, the capilliary tube is not necessarily easy to apply," Mikol said. "Generally, considerable time, engineering know-how, and testing are necessary to achieve balanced design of capilliary and system. Furthermore, the capillary is trouble-free providing it is properly applied. The tube is of such small bore that it may easily be plugged by:

"1. Dirt particles.

"2. Deposition within the bore of substances dissolved by the refrigerant elsewhere.

"3. Freeze-up of moisture within the bore.

"An additional consideration of importance is that proper operation of the capillary depends greatly upon optimum refrigerant charge.

"Accordingly, best judgment indicates that capillary tubes should be limited to factory-assembled hermetic units where careful control can be maintained over system cleanliness, evacuation, dehydration, and refrigerant charging.

"Although capillary tubes are of small bore (sizes in the range of 0.026 in. to 0.075 in. are commonly used), the flow, nonetheless, is governed by the same fluid flow principles as similar flows in large pipes and tubes. In other words, flow through capillary tubes, as the refrigeration industry uses the term, is in no way peculiar to the small diameters employed. . . .

"Evaporator pressure does not influence flow rate. . . . Condensing pressure has a strong effect. Sub-cooling, which . . . determines how much pressure drop must occur before flashing starts, is the other significant variable which influences flow rate."

Specified Conditions Of Unit Design

To design capillary tubes, Mikol explained, "a systematic design procedure starts with specified conditions as to: 1. refrigerant, 2. flow rate, 3. condenser pressure, 4. evaporator pressure, 5. sub-cooling. . . .

"Any engineer who has designed capillary tubes knows well that even the best design methods published to date give but a good first guess at proper length. Many of these engineers have worked out for themselves design tables and curves based upon past experience.

"Others have established either air flow or water flow tests, the results of which have been correlated with refrigerant flow rates for the same capillaries in refrigeration units. Even with these methods a bit of cut-and-try is still necessary to achieve an optimum selection."

Discussing sub-coolers and heat exchangers, Mikol said:

Discusses Sub-Coolers

"A sub-cooler is simply additional condenser surface in excess of that needed for condensing purposes. One well known make of room air conditioner uses conednsate drained from the evaporator coil to provide sub-cooling.

"A heat exchanger is usually formed by soldering a portion of the suction line to the upstream end of the capillary for a sufficient length to accomplish the desired amount of heat exchange between cold suction gas and hot liquid refrigerant.

"Sub-cooling (through use of sub-coolers or heat exchangers) is not accomplished to enable the capillary to pass more refrigerant. Their purpose is to increase the capacity of a refrigeration unit without increasing compressor power consumption. The decision to include either or both of these in the design of the unit evolves from the basic cycle analyses on the basis of which the design of the system is established. . . .

"In designing the capillary for

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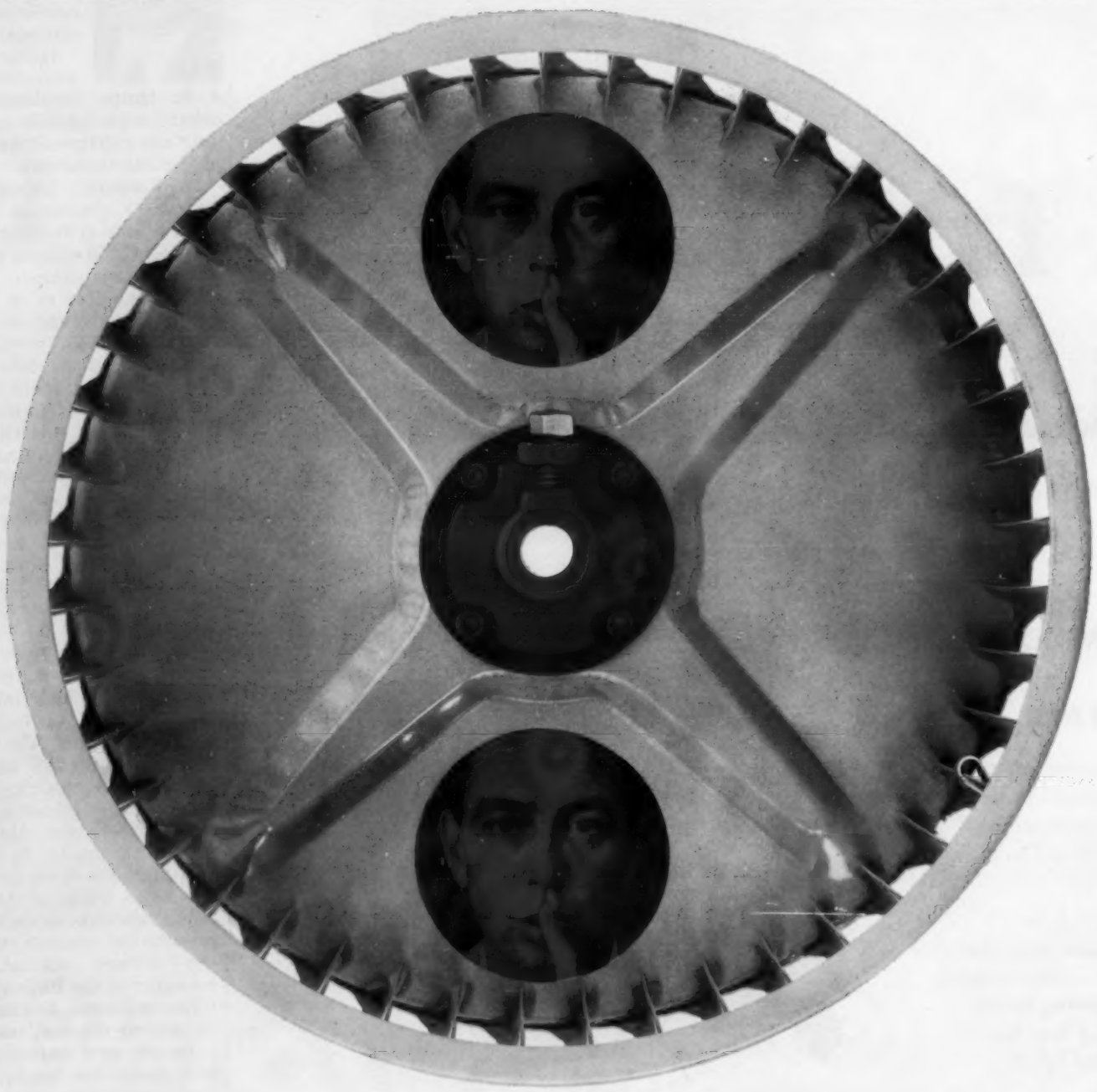
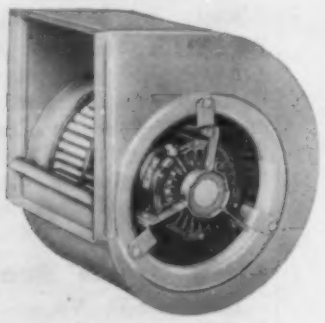


SILENCE IS THE HUB* OF THE MATTER



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By Paul Reed—Only 75¢ ea. Clip this ad and mail with your name and address to: Air Conditioning & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

For more information about products advertised on this page use Information Center, page 26.

Capillary Tubes--

(Concluded from preceding page)

a system it is necessary to know how much sub-cooling or how much heat exchange will be accomplished in order that the proper capillary length may be calculated. If there is liquid refrigerant cooling by either method, a longer length or a smaller bore of capillary must be provided to maintain, with sub-cooling, the same rate of flow as without.

'Capacity Balance'

"The term 'capacity balance' has been used to describe those stable operating conditions when liquid refrigerant enters the capillary and capillary flow rate equals compressor pumping capacity. . . .

"Generally, when capacity balance is achieved, the refrigeration system operation is stable and performance is good. Deterioration in performance occurs most often under very high ambient conditions, at which time liquid level in the condenser may be too low to provide a liquid seal at capillary inlet.

"Under such circumstances," Mikol said, "uncondensed vapor may enter the capillary, causing a severe drop in flow rate. Unit capacity is decreased because uncondensed vapor circulating through the cycle uses compressor capacity without producing refrigeration effect.

"Deterioration of performance in this way occurs but seldom with properly designed equipment. When it does occur it is usually of short duration peak periods of the hottest days. Over the years experience with capillary tubes has been good, and as a result the tendency is to apply to larger equipment, as for instance the 1½-hp. room air conditioners which are appearing in the market.

"The capillary tube, because of its simplicity and because of careful quality control of it and of the unit in which it operates, can truly be said to be service-free. The only problems to arise, and these are very few, have usually resulted from plugging by a metal chip, a bit of flux, or of solder originating downstream of the strainer, or by freeze-up caused by excessive moisture in the system.

'Best Procedure'

"In all cases the manufacturer's recommended service procedures should be consulted first. However, capillary tubes have been so service-free that there may not be a service procedure to cover. In the absence of specific instructions, the best procedure is as follows:

"1. Release the refrigerant charge very slowly to avoid loss of oil from the system.

"2. Remove the capillary and strainer assembly.

"3. Install a liquid line drier of proper size ahead of the capillary assembly.

"4. Replace the capillary and strainer with a new factory assembled replacement for the specified equipment being serviced.

"5. Pump the unit down using a vacuum pump.

"6. Recharge with the exact amount of refrigerant recommended by the equipment manufacturer.

"7. Seal and check for leaks.

"8. Check the operation of the unit."

Describes Labor-Saving Devices at Western RSES Meeting, Says Service Engineer 'Obliged' To Work Fast, Efficiently

PORTLAND, Ore.—A talk on labor-saving tools and instruments by John H. Spence, acting educational director of the Refrigeration Service Engineers Society, was a highlight of the 8th annual educational conference of the Western International Association of RSES held here.

Approached from the standpoint of the cost of labor and materials to the customer, the service engineer has an obligation to do the job faster and with more efficiency, Spence said.

HOIST FOR ROOM UNITS

He called attention to new hoist devices which are particularly adaptable to the job of placing room air conditioners in position over doors and windows and other air conditioning installations.

Other devices Spence described include:

A load testing instrument made by Simpson Electric Co., Chicago, to use in determining if electric current is heavy enough to carry a room air conditioner as an addition to its existing electric load.

Vacuum pumps for drying refrigeration and air conditioning systems.

Temperature and humidity recorders, and suction pressure recorders. Spence stressed the fact these enable the serviceman to obtain a 24-hour recording of the actions of a refrigeration system, and indicate whether the time intervals for the defroster are too long or too short.

Voltage and amperage records are valuable, Spence declared. Current may be okay from 10 a.m. to 2 p.m. but "all over the dial" at other hours. Recorders eliminate arguments with customers about the cause of poor performance due to inadequate electrical current.

LIGHT METERS

Spence also advised the use of light meters to test lighting intensities. Fading of the natural color in lunch meats, and in smoked meats, is caused by light intensity above 35 ft.-candlepower. This fading increases at an accelerated rate regardless of the type of light because of the action of Angstrom units, it was pointed out.

An ohm-meter, he said, takes guesswork out of defrost heater use, and shows whether the heater is working at the proper efficiency-rating. The ohm-meter may also be used to check ohms of resistance in anti-sweat heaters.

Attendance at the conference was 375. This included Canadians from Edmonton and Calgary, Alberta, and Vancouver, British Columbia.

Idaho, Oregon, and Washington were substantially represented and Montana attendance included RSES members from Great Falls, Helena, and Butte.

Another speaker, Willis Stafford of Detroit Controls, spoke on the topic of automotive air conditioning.

Irving J. Fajans, of New York City, president of Air-Conditioning & Refrigeration Wholesalers, discussed opportunities for the service engineer, how he can cooperate with the wholesaler for the benefit of the industry, and how the wholesaler can cooperate with him.

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This advertisement, currently appearing in automotive trade journals, is your introduction to service managers who will be looking for a local source of supply for Trona refrigerants.

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Air-Cooled Units Used Widely by Chrysler Engineering To Cool Body Drafting Rooms, Clay Modeling of Cars

By C. Dale Mericle

DETROIT—A firm believer in "practicing what it preaches," Chrysler Corp. has made extensive use of air-cooled air conditioners since they were introduced a few years ago by its Airtemp Div.

In fact, more than 600 hp. of air-cooled equipment has been installed for Chrysler in the Detroit area, according to R. A. Gonzalez of Airtemp, who points out that Airtemp is represented also by 300-odd hp. of air-cooled installations in non-Chrysler jobs in Detroit.

Included in the latter are a variety of applications. Among them are the parish offices of a church in downtown Detroit, two clubs, 16 branches of a bank, as well as numerous installations in homes.

Emphasizes Problems In Water-Cooled Units

This use of air-cooled equipment in Detroit, located on the mile-wide Detroit river, emphasizes the fact that although a presumably unlimited source of water can be nearby, the problems of getting that water to the air conditioner and then disposing of it often make the use of water-cooled equipment impractical, Gonzalez indicates.

Two of the Chrysler Corp. installations run into considerable size. One consist of 30 8-hp. air-cooled units for a total of 240 hp.; the other is made up of 20 8-hp. units and six 5's, totaling 190 hp., Gonzalez reveals.

Larger of these two jobs provides cooling for automobile body drafting rooms. Here the 30 air-cooled condensing units are installed on the roof of a large factory building that the Engineering Div. of Chrysler has leased to obtain additional space.

Fan-Coil Units Mounted In Ceiling

The companion 30 fan-coil units are mounted on the ceiling of the drafting room, which occupies the top floor of the building. The fan-coil units, therefore, are immediately below the air-cooled condensing units on the roof.

With few exceptions, both the condensing unit sections and the fan-coil cabinets are located at the outer walls of the building. For these the refrigerant lines as well as the electrical conduit run from the condensing units down the outside of the building a few feet then turn in through a window to the fan-coil units.

Adjust Windows For Lines

Windows in this building are the typical multiple "light" steel sash front in most industrial buildings, so it was only necessary to remove one small pane of glass per unit to accommodate these lines. Sheet metal with openings for the lines have been substituted for these panes.

By the same token, if and when Chrysler gives up its lease on this building, it can move the air-cooled units elsewhere, having only to replace the panes of glass removed for the lines.

This possibility, according to Gonzales, was a major factor in the decision to employ air-cooled units for this job.

While air-cooled equipment lends itself admirably to such "temporary" installations, it can likewise prove the best solution for permanent applications, Gonzalez contends. He cites as a case in point the 190-hp. total in a new Chrysler building in Highland Park, Mich., occupied by the clay modeling section of the Engineering Div.

Here, as is generally known, complete full scale models of proposed models of automobiles are sculptured in clay for detailed study by engineers and corporation executives before the final decision is made on exactly which designs will go into actual production.

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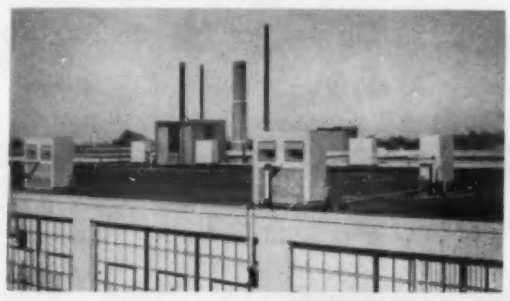

LEFT: 30 air-cooled Airtemp condensing units of 8 hp. each on roof of building in Detroit provide 240 hp. of air conditioning for Chrysler automobile body drafting rooms.

RIGHT: Refrigerant lines and electrical conduit run through window from fan-coil units to air-cooled condensing units on roof directly above. Chrysler automobile body drafting rooms are in leased building, so air-cooled equipment was installed in this manner to simplify moving it in future.

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Sturdy, lock tight construction with double-coated vinyl finish makes H&M Air-Cooled Condensers last years longer—without vibration and rattling. Slow speed, deep pitched fans and draw-through design provide full capacity—quietly.

Because of these facts, Halstead & Mitchell Air-Cooled Condensers are in greater demand than ever. Write for Catalog AC-101 for complete details on Remote Air-Cooled Condensers; ACR-100, on Residential. *Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pennsylvania.*

HM Halstead & Mitchell

For more information about products advertised on this page use Information Center, page 26.

CLAY modeling section of Chrysler Engineering Div. occupies new building air conditioned by 26 air-cooled units. Here are four of the six 8-hp. condensing units serving the auditorium where completed full-scale clay models of cars are displayed for final judgment of engineers and executives.

ROOMY "catwalk" behind units on roof of clay modeling section building permits safe and easy servicing of equipment.

Chrysler's Use of Air-Cooled Units--

(Concluded from preceding page)

Six of the 20 8-hp. air-cooled conditioners serve the display auditorium used by the clay modeling section. There is a heavy lighting load in this auditorium because here the completed clay models of cars are put on display for that fateful, final decision.

The other 14 8-hp. units and the six 5-hp. units provide cooling for various rooms of the clay modeling section.

Multiple use of individual package units can be fully justified in such an application, Gonzalez says, because of the wide variation of load that occurs in the clay modeling section. The display auditorium, for example, is occupied intermittently. The cooling load also varies sharply in the actual work rooms of the section.

The 26 air-cooled condensing unit packages are installed on the roof of the clay modeling building, being set on a steel framework approximately 2 ft above the roof surface. A wide "catwalk" is located directly behind several of the units to permit safe and easy servicing.

Facing Opposition

Milwaukee To Redraft Law on Water-Saving Devices for Cooling

MILWAUKEE—In the face of heavy opposition to a proposed ordinance to restrict use of water in air conditioning equipment here, common council's utilities committee ordered it redrafted.

The measure would place a charge of $20 a year for each ton of refrigeration capacity beyond three tons on water-cooled air conditioners which do not have a water conserving device. The fee would supplement regular water charges.

The chairman of the utilities committee appointed opponents of the proposed ordinance and city officials who presented it to the redrafting group.

Representatives of the air conditioning industry and small businessmen were principal opponents to the measure. The small businessmen argued they could not afford elaborate refinements on their air conditioning equipment in order to save water.

City officials supporting the ordinance stated that air conditioners wasted water at a time when other consumers wanted it most. They warned that an investment of $21 million in the city's water system would be needed "if air conditioners were allowed to use water without restrictions."

Tool Making Firm Moves Into Conditioned Plant

PHILADELPHIA — Modern Mfg. Co., Inc., manufacturer of tools for industry, currently operating at Edgemont & Clementine Sts. here, has opened its new 10,000-sq. ft., completely air conditioned plant, it was announced by Edward Jastrey, president.

The new plant is located in Williow Grove in suburban Philadelphia. Complete and up-to-date facilities will enable Modern to improve its present production quotas, and to produce new items which the company plans to market in the future, the announcement said.

The plant "offers top facilities for employes, including a spacious cooled lunchroom."

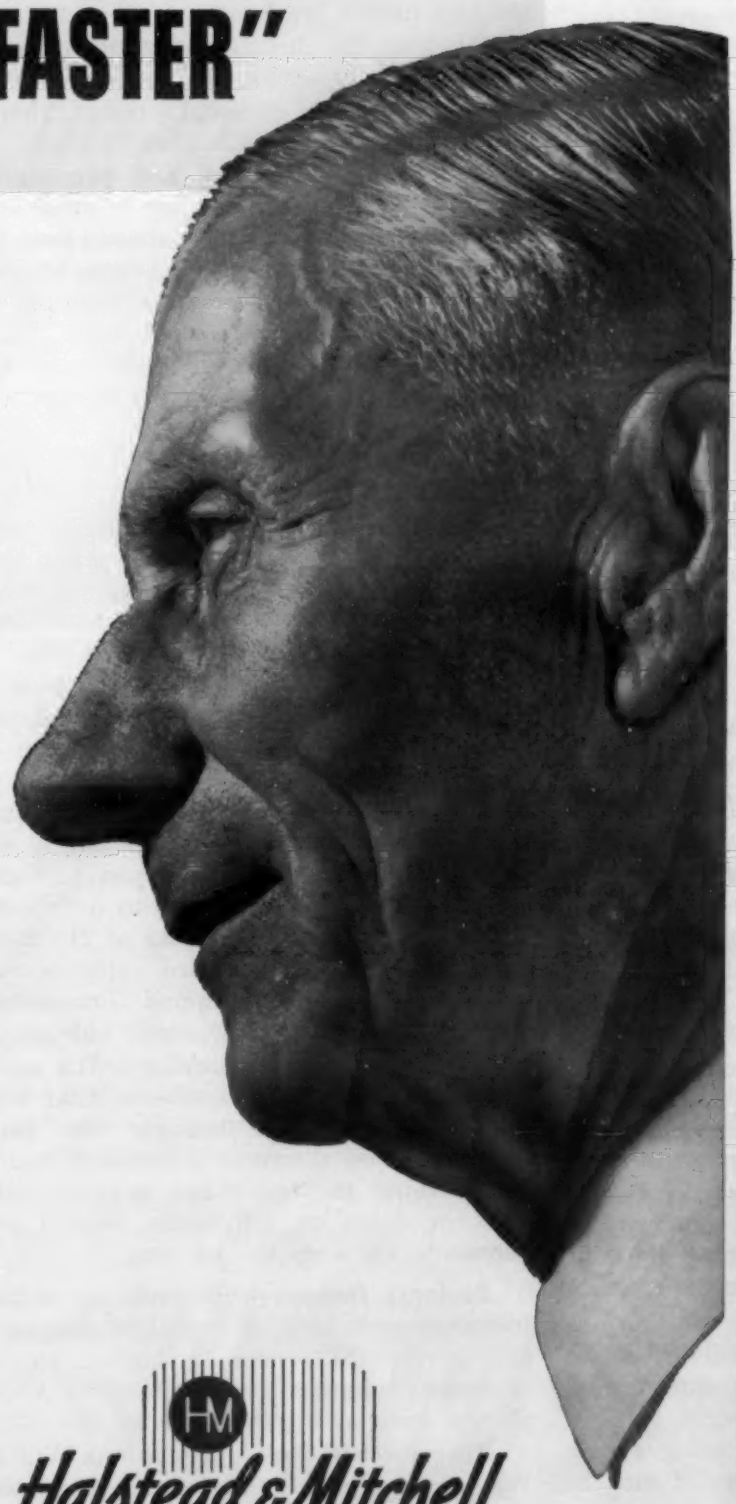
Files Business Name

BUFFALO—A business name has been filed in the Erie County clerk's office for 5 Below Refrigeration, 188 High St.

SO HALSTEAD & MITCHELL WHOLESALERS SAID...

"TURBU-FLO AIR-COOLED CONDENSERS SELL FASTER"

Type ACR—Residential Air-Cooled Condenser



Turbu-Flo Air-Cooled Condensers are profitable to handle, just as H&M products have always been. Halstead & Mitchell has always had that *something extra* that can be sold—Turbu-Flo Air-Cooled Condensers; Cooling Towers with a 20-Year Guarantee on the wetted deck surfaces against rotting or fungus damage; Cleanable Water-Cooled Condensers.

H&M Air-Cooled Condensers are available in a wide range of capacities for all air conditioning and refrigeration applications. Wide fin spacing, exclusive Turbu-Flo fins, sturdy, rattle-proof construction assure constant high capacity and lowest operating and maintenance costs.

Find out for yourself why Halstead & Mitchell is the best line to handle. More information is yours for the asking. *Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pennsylvania.*

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They'll Do It Every Time

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INTERPLANETARY CORP. CONVENTION
RESEARCH IS THE VERY LIFEBLOOD... THE HEART AND CORE OF OUR BUSINESS..
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How To Upgrade Morale Of Valuable Personnel

PERSONNEL managers are fond of telling this story about a fellow who sauntered down a street shouting: "No, no, no, no!"

Somebody asked him what was wrong.

"Nothing," he exulted. "I'm a Yes Man, and this is my day off."

Moral to this tale: employers shouldn't preach the gospel of Free Enterprise, along with personal independence to create, etc. *in public*—then switch around to "thought control" in their own organizations.

Helping employes to utilize and realize more and more of their potentials—and making their work more satisfying and meaningful for them—are among the most important responsibilities of business executives, declares management consultant F. M. Finlayson. Hence the Boss shouldn't try to remake employes in his own image.

Management might start by taking a realistic look at how employes feel about their relationship to the company—so as "to know where we are now before deciding where we are going." What Mr. Boss deems workers' attitudes *should* be, and what they actually are, often are poles-apart.

Research in universities and in industry is shedding new light on how employes feel about themselves relative to their employers, and how these attitudes affect their work. Basically they want to be individuals, it seems, rather than cogs in a machine.

They aren't peasants or hunkies anymore.

All employes inhabit a higher sphere of cultural awareness than their parents did. And, more than anything else, they aspire to better education and greater "culture" for their sons and daughters. So, back to our original premise:

Most American businessmen believe in the free enterprise way of life. As American citizens we respect wholesale freedom—such as the rights of our neighbors to drive sports cars and wear checkered vests, or to be religious devotees or precinct politicians or whatever. So long as they get their work done, why not grant the same freedom of action to employes?

Other virtues which EMPLOYES agree upon: self-reliance, equality of opportunity, religious tolerance, and the right to be a nut in your spare time—like being a ham radio operator or bird watcher—if such be your idea of fun.

Historically, indigenous American attitudes toward Personal Freedom keep alive our nation's Free Enterprise concept (and made the latter possible).

That's why corporate censorship of employes' dress and deportment, after-working-hours recreation and hobbies (or lorgnetting of employe's wives by executive examining committees) do not set well with free Americans—upon whose spunky individualism this nation grew to its present stature.

Likewise, the dictation of political party affiliations by business or union bosses is resented. Ideals of personal freedom, therefore, ought to underpin business values.

Our policies, systems, and procedures should encourage independence of mind and action—rather than stultify these ideals by forcing employes into strait-jackets of conformity (as described so uncomfortably by William Whyte in his recent book, "The Organization Man"). Happy personnel enjoy these satisfactions, according to Mr. Finlayson:

Recognition—the need to feel that one's achievements are known and appreciated.

Responsibility—the need to realize you have power over your own actions, and that you can accomplish your assigned tasks without fear of extraneous appraisals based on the way you live or dress or worship.

Affiliation—the need to have friends in your business who like you as a person, and not because they have power over you or you over them.

Evaluation—the need to know that standards for judging your performance are reasonable, just, and based upon performance rather than conformity to a "norm." Obeisance to capricious whims of The Boss, or upnosing because of race, religion, etc., more and more are considered Unamerican.

We can sum up this whole subject by reverting to sports phraseology. It's *teamwork,* plus *individual excellence,* that wins games. The baseball manager who plays favorites, who distrusts a brilliant southpaw because the latter has unkempt relatives or dotes on jellybeans, doesn't win pennants. Or keep his job long.

Business teamwork depends on *mutual tolerance*—not only of race and religion—but of the differences in human nature, attitudes, behavior, and aspirations which always occur amongst associates.

To corporate directors who (as William Whyte reports so disconcertingly) would remold all employes in their own images, we quote the Bible:

"Judge not, lest ye be judged."

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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"Put it before them briefly so they will read it, clearly so they will understand it, forcibly so they will appreciate it, picturesquely so they will remember it, and above all accurately so they will be guided by its light."—*Joseph Pulitzer.*

OFF THE CHEST

'YOU'LL LOVE THIS ONE' HAS MANY CHUCKLES

Royal Canadian Air Force
Dept. of National Defense
Manitoba, Canada

Editor:

I have just received a copy of "You'll Love This One . . ." by George F. Taubeneck and have enjoyed many a good chuckle while thumbing through it.

I would very much like to have your permission to use some of the anecdotes in this book for our Station newspaper, the "Macdonald Rocketeer." We operate on a non-profit basis, and as our budget is quite limited, I cannot offer to pay for the privilege of using your material. However, I am hopeful that you may see fit to allow us to reproduce excerpts from this book. If you would like to receive a copy of our newspaper for your perusal, I will gladly send you one.

F. W. BARCLAY

INSTALLATION ARTICLE DRAWS ATTENTION

The O. A. Sutton Corp.
Wichita 1, Kan.

Editor:

The article on page 48 of the Feb. 25, 1957 issue of your fine magazine concerning installation of Vornado Central Air Conditioners at a 1-every-20-minute rate was interesting and productive. This particular article has been brought to our attention many times.

We believe all of our distributors throughout the country will find this article of great interest. We would like to reproduce it for our distributors.

DARRELL B. COWELL

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To See the Industry In Action EVERY WEEK

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ASRE May Take on 'New Look'--

(Concluded from Page 1)

discussion in the council of the ASRE, but which had never been brought up in an open meeting. However, it was brought up in the report by retiring president C. M. Ashley, and also in the talk by H. F. Spoehrer, incoming president, following his induction into office.

What Presidents Said On ASHAE Cooperation

It was said that the ASHAE-ASRE Committee on Cooperation had been reconstituted and was directed by the councils of both societies to "explore further areas of cooperation and the problems which might be involved in possible eventual merger."

This action was taken, it was stated, because of the feeling of many members in both societies that either closer cooperation or some form of a merger would be beneficial to all. However, the ASRE officers were careful to point out that the action does not involve any commitment or any expression of intent with respect to either society.

2/3 Majority Vote Required for Merger

Any sort of a merger plan by the two societies would require for approval a two-thirds majority vote of the actual total membership of each of the two societies.

Following the induction of new president Spoehrer, other new officers introduced included Cecil Boling, first vice president; Daniel D. Wile, second vice president; and George K. Iwashita, treasurer.

New directors elected include Carl R. Fagerstrom, Ralph A. Gonzalez, James W. Snyder, and R. H. Tull. Regional directors named include Charles Harris, Al Nevin, Dr. J. G. Woodroof, and H. W. Walling.

Sum Up 'New Look'

The "new look" in ASRE was summed up in the addresses by Spoehrer and Ashley. Both pictured more active and aggressive leadership for the ASRE in research and technical activities, and in industry affairs generally.

"While we must always keep the activities of the society on a high technical plane," Spoehrer related, "at the same time it can not be off on 'Cloud 9' and out of the stream of the industry's progress.

"The society must not only assume leadership in scientific objectives, but that it cannot stand apart from other activities which are important to the progress of the industry."

What this means, Spoehrer elaborated, was greater cooperation with other industry associations and technical societies. In such cooperation, the objectives will not be merely to further basic technical knowledge, but to aid in the development of improved products, and to improve the knowledge of the application of these products, for the benefit not only of those engineering and installing such products, but also for the ultimate user.

Ashley said that leadership of the ASRE in the field of standards has been maintained with the adoption of six new or revised standards. Currently, five additional standards are in process.

Membership Up 600 During Year

The retiring president also touched on the problem of encouraging young engineers to enter the industry. In reporting on the society's membership drive, Ashley said that membership rolls had increased about 600 in the last year.

Those present at the meeting voted approval of a resolution to submit to the membership for approval a revision of the ASRE constitution and by-laws, which revision was passed by the ASRE Council on June 2.

There was some argument on the resolution, Council Member Charles Hamilton of Vancouver alleging irregularities in the council procedure, and also claiming that some of the revisions passed at the June 2 council meeting were unworkable.

However, his amendment to the resolution calling for substitution of the revisions proposed at the April 26 meeting of the council failed to get a second. The proposal to submit the June 2 set of revisions was approved with only three dissenting votes.

Approve New Standards At Meeting

The following new ASRE standards were announced as having received approval at the meeting:

1. PR-24 Methods of Testing for Rating Liquid Coolers.
2. PR-32 Methods of Testing for Rating Bottled Beverage Coolers.
3. PS-34 Designation of Refrigerants.

It was announced that registration included 545 members, 57 guests, and 143 ladies.

The "Wolverine Award" was presented by retiring president Ashley to Dr. Tamami Kusuda, Worthington Corp. staff engineer, and Prof. James L. Threlkeld of the Mechanical Engineering Department at the University of Minnesota for their paper entitled "Temperature Changes in Refrigerated Rooms During Pull Down Period."

Instituted in 1943 by the Wolverine Tube Div. of Calumet & Hecla, Inc., the award is given annually to the author of the best paper appearing in "Refrigerating Engineering," the journal of the ASRE.

George C. Meyer Dies

ALBANY, N. Y.—George C. Meyer, 63, a refrigeration engineer, died suddenly at his home. He operated the Artic Refrigeration Service and had been a resident of Albany for the past 20 years.

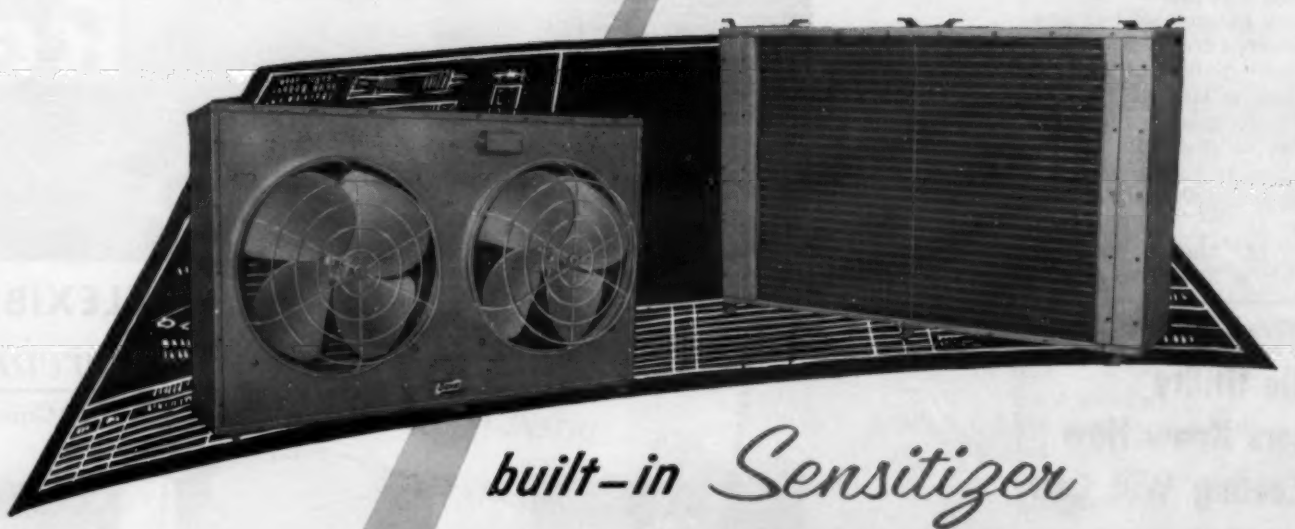
Freezing Preservation Of Foods Book Issued

WESTPORT, Conn. — Volume II of the third edition of *The Freezing Preservation of Foods*, by Donald K. Tressler, Ph.D., and Clifford Evers, B.S., M.S., was scheduled to be released June 1 by AVI Publishing Co., Inc., it was announced.

Due to the remarkable progress made by the American frozen food industry since the 2nd edition was published, it has been necessary to rewrite the book and print it in two large volumes, the publisher points out.

Volume I, released earlier, deals with freezing of fresh foods, with nine of its 31 chapters being entirely new. Volume II is devoted to the production, marketing, and use of frozen pre-cooked and prepared foods, and desserts, baked goods, and confections, according to the publisher.

BOHN Presents the NEW ANGLE in Air-Cooled Condensers



built-in Sensitizer maintains proper head pressures

Reduces Cost and Simplifies Installation

BOHN engineers have developed a winter controlled air-cooled condenser equipped with built-in sensitizer to maintain head pressures when outside air temperature drops . . . eliminate hand valves in the control system . . . simplify piping.

Cost of extra valve and installation expense is avoided. Further cost reduction is achieved by designing for simple multiple circuiting.

Of finest quality, new BOHN air-cooled condensers are economically priced. They offer sturdy, rust-resistant construction in grained aluminum cabinet housing . . . trustworthy capacity ratings . . . famous Betz coils . . . fans which operate quietly . . . life lubricated ball bearing motors with thermal overload protection.

Read full details on the *NEW ANGLE* in air-cooled condensers.
Reserve your free copy of the new BOHN CATALOG BU-1.

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Manufacturers of Commercial Refrigeration, Industrial Air Conditioning and Special Heat Transfer Surface

BOHN ALUMINUM & BRASS CORPORATION • BETZ DIVISION • DANVILLE, ILLINOIS

RESIDENTIAL air conditioning installation and service kit offered by Imperial Brass Mfg. Co. includes a selected set of tubing tools and service tools chosen by installation engineers. Completely equipped kit weighs 34½ lbs.

Imperial Installation, Service Kit Is for Residential Air Conditioning

CHICAGO—A new residential air conditioning installation and service tool kit has been introduced by The Imperial Brass Mfg. Co. here.

A selected set of tubing tools and service tools, chosen by installation engineers to fit the needs of most installation requirements, are gathered into a single steel tool box which is offered free of charge with the tool set, according to the company.

Designed for working all size tubing from ⅛ to ¾-in. OD, the set includes a tube cutter with spare cutting wheel, flaring tool, tube benders, a full set of swaging tools, and tube reamers. In addition, a double gauge charging and testing unit, and two charging hoses, are included. Revision of the set can be made at the customer's request.

The heavy gauge tool box has two cantilevered trays, which let all tools immediately be visible when the box is opened. A snap lock, with keys, assures tool protection. Twelve dividers for the trays are also included, and can be adapted to the personal needs of the user.

Weight of the completely equipped kit is 34½ lbs. Size is 21 in. by 7½ in. by 7¼ in. Additional information is contained in Bulletin No. 10,542-E on Imperial No. 392-F Service and Installation Kit.

'Care-Free' Home To Have Year-Round System

PITTSBURGH — Trying to achieve a maintenance-free home, the Aluminum Co. of America disclosed detailed plans for the Alcoa "Care-free Home," a new air conditioned dwelling to be built in selected locations throughout the nation this year.

Central air conditioning and heating will be provided through a continuous duct installed in the perimeter of the home, Alcoa said. The Care-free Home will be insulated throughout with aluminum foil-backed insulation, claimed to provide

The Care-free Home will be a one-floor, slab construction dwelling with three bedrooms, two baths, and a central core kitchen. Alcoa was enlisting about 50 builders to construct the Care-free Home for public exhibition this fall.

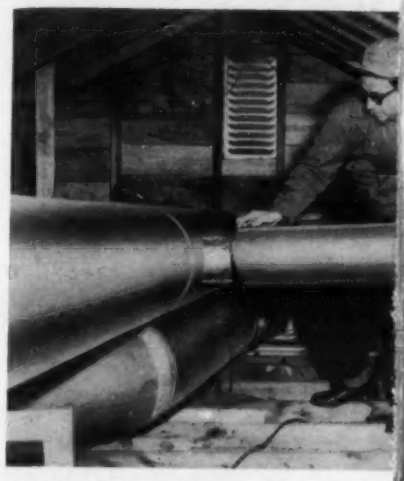
6-Ft. Sectioned Round, Pre-Provides Own Insulation,

KANSAS CITY, Mo.—Round, prefabricated duct made of glass fiber has been introduced by Gustin-Bacon Mfg. Co. here under the name "G-B Duct."

Besides providing its own insulation, the new type duct is claimed to make an excellent sound trap, to be easier to install, and to provide over-all economies.

It is manufactured in standard sheet metal sizes ranging from 4 in. to 14 in. i.d. in 6-ft. lengths and has, the manufacturer says, the same air friction factors "for all practical purposes" as conventional round sheet metal pipe.

Besides being offered in the individual sizes, the new duct is available in complete pack-



STRAIGHT line connections are made in using a short piece of standard sheet met alignment sleeve. Duct sections are butte gether with vapor barrie

Bill Stuffers Tell

Nashville Utility Customers Know How Much Cooling Will Cost

NASHVILLE, Tenn.—Central air conditioning can be operated here for approximately 25 to 30% of the winter electric heating cost for the same space, the Nashville Electric Service advised its customers in a recent bill stuffer.

Electric room air conditioning can be operated for 20 to 25% of the cost of winter electric heating, it added.

The bill stuffer is part of a three months long air conditioning promotion currently conducted by the utility, according to William D. Hall, sales promotion manager.

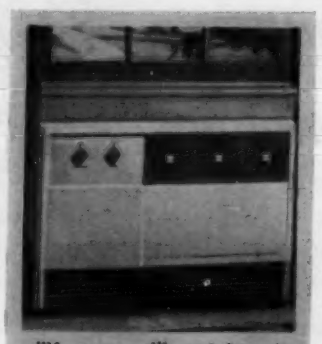
Titled "It's Old Fashioned to be Hot, Air Condition Electrically," the bill stuffer was sent to 115,000 customers with their light bills.

It described the best uses, advantages, and operating cost of room air conditioners, central air conditioning, and heat pumps.

Of the heat pump, the folder said operating cost for cooling is equivalent to the central air conditioning system, while heating cost is about half as much as by electric heating.

Choice Factory For Expanded Line Residential

PHILCO'S FIVE FLEXIBLE SYSTEMS
for residential and commercial Air Conditioning!
(¾ H.P. to 7½ H.P. Capacities)

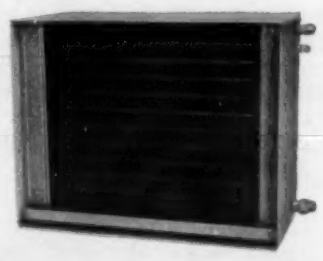


"Year round" upright unit cools in summer, heats in winter. Can be installed for either remote or direct operation.

Self-contained attic systems ... complete with glass fiber ducts ... supplied in kit for quick, easy installation.

"A" type vertical airflow evaporator, specially designed for either UPFLOW or COUNTERFLOW hot air heating systems.

Flexible evaporator-blower connects to existing ductwork ... or operates as independent system (residential or commercial).



New horizontal airflow evaporator for installation in existing forced hot air heating systems.

Air cooled condensing units for remote installation. Top air discharge prevents damage to grass or shrubbery.

LOOK AHEAD ... *and you'll choose* PHILCO.

For more information about products advertised on this page use Information Center, page 26.

Fabricated Glass Fiber Duct Soundtrap, Vapor Barrier

the Gustin-Bacon Mfg. Co. ductwork by
al furnace pipe as a reinforcement and
d tightly over the sleeve and taped to-
pressure-sensitive tape.

ages for attic or crawl space residential air conditioning systems.

Prices (f.o.b. shipping point) range, in large quantities, from 45 cents per lineal foot for 4-in. i.d. duct to $1.30 per ft. for 14-in. duct; in smallest quantities from 60 cents per ft for 4-in. duct to $1.74 for 14-in. duct.

In announcing the new G-B duct, Gustin-Bacon released data on the duct's composition, performance, and application.

BAKELITE BINDER

Binder holding the glass fibers in the molded duct is bakelite with an additive to provide fire-resistant characteristics. Outer covering is a casing of aluminum pigmented plastic cemented to the duct under tension to give a smooth metallic appearance.

Casing is claimed to be an excellent vapor barrier.

Insulation value is said to be high, considerably better, the manufacturer claims, than sheet metal duct with average insulation. "K" factors are given as 0.21 at 50° F. mean temperature, 0.22 at 75° F. mean temperature, 023 at 100° F. mean temperature.

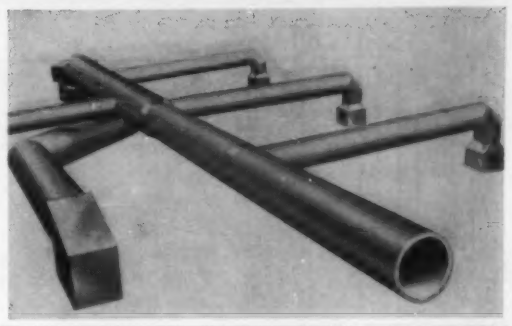
Further advantage claimed for its insulation value is the uniform wall thickness and absence of joints or seams in 6-ft. sections. Wall thickness ranges from 0.761 in. for the 4-in. i.d. duct to 1.0 in. for the 12-in. i.d. size.

No problems with condensation on duct surface in residential applications are expected, the manufacturer says, claiming there is ample insulation to protect against condensation with temperatures as low as 50° F. under ambient conditions of 90° F. and 75% r.h.

As a sound absorber, a 6-ft. long section of the round duct will reduce loudness of airborne noise by more than 50%, the manufacturer claims. Tests actually indicate reductions of noise as much as 85%, Gustin-Bacon says, adding that sound transmission through metal-to-metal connections of metal ducts is also completely eliminated.

Sound-absorbing characteristics of the G-B duct can be noted, the company claims, even when used as run-outs from the conventional metal extended plenum.

The duct has received Underwriters' Laboratories approval for having a flame spread classification of not over 50 under the UL Standard Test Method, which Gustin-Bacon says is the most critical requirement. The company says "it is almost a certainty that we will get approval" on other requirements of this test.



STANDARD sheet metal furnace pipe reducer is used to join two diameter duct sections together. Reducer is slipped into larger duct and "V" slots are cut around periphery of larger size. Shown is a typical attic installation.

NO PROBLEMS SEEN IN INSTALLATION

Installation of G-B duct is said to present no special problems and is claimed to be easier to handle than metal.

Straight line connections are made by using a short piece of standard sheet metal furnace pipe as a reinforcement and alignment sleeve. G-B duct sections are butted tightly over the sleeve and taped together with vapor barrier pressure-sensitive tape.

To fabricate elbows, 45° cuts are made with miter box and saw or cut out with knife and template. The miter cuts are butted together tightly and the joint taped.

A standard sheet metal furnace pipe reducer is used to join two diameter duct sections together. Reducer is slipped into larger duct and "V" slots are cut around periphery of larger size, which is then folded down against transition face and the slots taped together. The smaller section is then slipped over the reducer and the joint taped.

Air supply runouts are fastened to main supply duct by means of sheet metal connections which are inserted in the main supply duct.

Franchises Available of PHILCO Air Conditioning!

Leading contractors, dealers and wholesalers in the warm air, sheet metal, plumbing, refrigeration, appliance and air conditioning industries are cordially invited to investigate this "once in a lifetime opportunity."

Philco . . . world leader in home and office air conditioning . . . has several choice, protected direct-factory franchises still open for its complete new line of residential and commercial air conditioning.

Take advantage of this really worthwhile offer. Get your share of this growing billion-dollar market. Mail the coupon . . . NOW . . . for prompt and courteous consideration.

- PROVEN PERFORMANCE
- NEW LOW PRICES
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- IMMEDIATELY AVAILABLE

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"C" AND TIOGA STREETS PHILADELPHIA 34, PA.

Yes, I'm interested in receiving further information about direct factory franchise for the complete, new line of Philco residential and commercial air conditioning.

☐ Please send full particulars on the new Philco direct factory franchise plan for central residential air conditioning.

☐ Please call on me in person to discuss the plan.

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(AC-617)

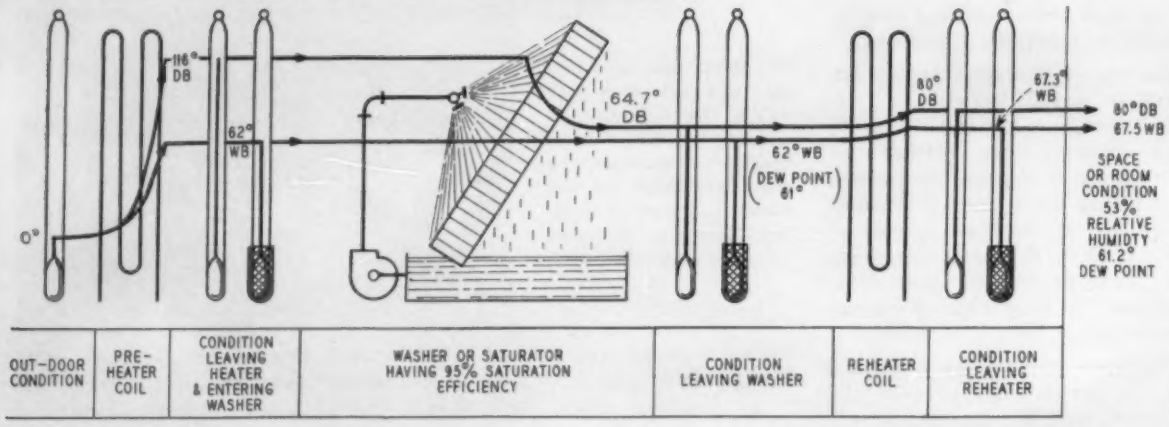
Upped Service Demands Cause Denver Research Outfit To Expand

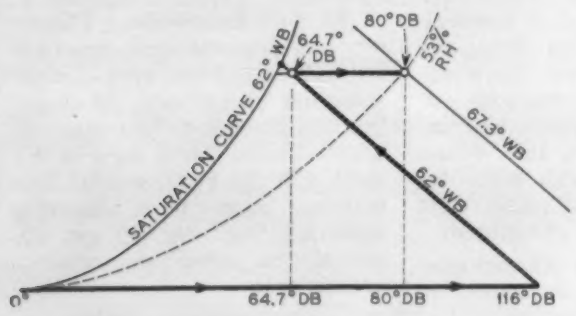
DENVER — A three-fold expansion of the facilities of Colorado Research Corp. here was announced by Dr. Richard C. Webb, president.

The Denver electronic development organization, subsidiary of Carrier Corp., has been forced to move from its present space at 4697 and 4771 East Evans Ave., Denver, due to increased demands for its services, he stated.

In addition to contracts with industrial and governmental clients for consulting, research, and engineering work in electronics and applied physics, Colorado Research is engaged in the study of advanced air conditioning methods for Carrier.

The expansion will be into a new, one-story laboratory and office building in Broomfield Heights, 15 miles northwest of Denver.





LEFT: The above process traced on the psychrometric chart.

ABOVE: Sprayed coil humidification system such as used in a hospital where outside air passes over a pre-heater that raises its dry-bulb temperature to 116° F. while the wet-bulb temperature rises only to 62°.

FIGURE 1

Winter Humidification

Advocates Sprayed Coil Method To Raise Relative Humidity, Safeguard Health

E. LANSING, Mich. — Without much humidification, conditions more arid than a desert are set up in a home heated to 70° F. when the outside temperature is 0° F.

D. C. Lindsay, vice president of Air & Refrigeration Corp., told heating dealers attending a forced warm air conference at Michigan State university that such dry atmosphere is unhealthy for the inhabitants.

It irritates the nose and throat by drying out mucous membranes, making people more susceptible to germs, he explained. It also sets off dust that in a more humid atmosphere would not get into the air.

Germs travel on such dust particles, he asserted. They don't have wings but ride on the motes which we see in the morning sunbeams streaming through a window.

When a person sneezes, these tiny dehydrated particles grab up the moist germ-bearing spray and set up an atmosphere of cross infection between people, Lindsay declared.

Adding moisture to the air counteracts that chain of events, Lindsay told the National Warm Air Heating and Air Conditioning Association sponsored forum. Even at 35 and 40% r.h., there is less tendency for dust particles to remain in suspension.

Winter Humidification Termed 'More Important' Than Summer

That is why winter humidification is even more important healthwise than summer dehumidification, he contended.

The next question then is how much moisture should be added to the air? We have left the public guessing on this score, Lindsay believes.

A can of water on the radiator is little better than spitting on the floor for adding humidity to the air, he declared.

A 20,000-cu. ft. house will require from 10 to 20 gals. of water a day to maintain 35% r.h. at 0° F. outside temperature. This means adding about three grains of moisture to each cu. ft. of air introduced or allowed to filtrate into the house —or 40 grains per pound of air.

He disavowed the belief of some people that fuel is saved when the air is humidified. Every pound water requires 1,000 B.t.u. or so to evaporate it, he noted.

How To Add Needed Humidity

How should this needed humidity be added?

Lindsay contended that submerged coils and grids and steam sprays upset the dry-bulb temperature. In doing so they defeat their purpose by raising the temperature in the house. Such devices also often develop and transmit unpleasant odors to the air stream.

He recommended instead air washers or direct atomizers that use a mechanical means of atomizing the water spray. A sprayed coil would be even better for home heating systems, though they are not now available as a part of standard furnaces, he said.

As used in hospitals, however, sprayed coil humidification systems work like this (see Fig. 1):

Outside air at 0° F. passes over a pre-heater that raises its dry-bulb temperature to 116° F., while the wet-bulb temperature rises only to 62° F.

The air then passes over a sprayed coil where the dry-bulb temperature is dropped to 64.7° F. The wet-bulb temperature remains at 62° F. A sprayed coil six rows deep will give about 93% saturation, he said.

Leaving the humidifier the

(Concluded on next page)

He wouldn't be guilty of leaving fingerprints!

The hands that go into these goatskin gloves belong to a skilled worker in General Electric's new Tyler, Texas plant where whole-house air conditioning equipment is built.

The reason for the goatskin gloves? Even the barely perceptible perspiration that forms on human fingers would have an adverse effect on the compressors which are the heart of General Electric central system air conditioning. In any necessary handling before the compressor is factory-sealed for protection, goatskin gloves are worn.

This is an extra step we take—one of the many ways we safeguard the quality of our products. And this quality control, standard practice at Tyler, Texas, is far-reaching in its effects. Wherever you may install General Electric Home Heating and Cooling systems it is your assurance of the kind of user satisfaction that means customer good will and continued profits. General Electric Home Heating and Cooling Dept., Tyler, Texas.

Progress Is Our Most Important Product

GENERAL ELECTRIC

For more information about products advertised on this page use Information Center, page 26.

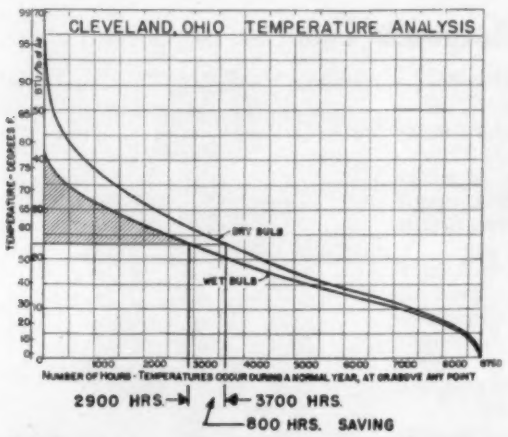

CLEVELAND, OHIO TEMPERATURE ANALYSIS
TEMPERATURE - DEGREES F.
DRY BULB
WET BULB
NUMBER OF HOURS - TEMPERATURES OCCUR DURING A NORMAL YEAR, AT OR ABOVE ANY POINT
2900 HRS.
3700 HRS.
800 HRS. SAVING

FIG. 2 shows annual refrigeration hours which may be saved. Curve indicates number of hours during the year any given wet-bulb or dry-bulb temperature will prevail or be exceeded.

Winter Humidification--

(Concluded from preceding page)

air is passed over a reheater bringing it to the desired temperature for delivery to the room.

Such a system can also be used, Lindsay pointed out, to save costs on air conditioning by cutting down on the number of hours needed to operate the refrigerating machinery.

"Whenever the prevailing outdoor wet-bulb temperature is at or below 55° F.," he explained, "which is about the average required delivery temperature for a comfort air conditioning system, refrigeration may be shut off.

"That can be done if evaporative cooling is available through an air washer or sprayed coil.

"The annual refrigeration hours which may thus be saved are shown on curves, such as in Fig. 2, which indicate the number of hours during a year any given wet-bulb or dry-bulb temperature will prevail or be exceeded.

"As shown in Fig. 2, Cleveland may expect about 2,900 hours in a year during which the wet-bulb temperature will exceed 55° F. On the other hand, the dry-bulb temperature in Cleveland will exceed 55° F. approximately 3,700 hours.

"If evaporative cooling is available, approximately 800 hours of refrigeration operation may be saved.

"Similarly in Denver, the indicated saving, based on the curve for that city, would be 1,900 hours."

How To Calculate

Lindsay also showed how the area above the 55° F. wet-bulb line on these curves could be used to calculate the expected ton-hours of refrigeration which would be required for each pound of air. This could in turn be converted to horsepower or kilowatts.

Research studies have found that vaporizing tri-ethylene glycol into the air cuts down cross infection, Lindsay reports. However, vaporizing the glycol at high temperature has to be avoided, it was learned, because at elevated temperatures the liquid dissociates and the vapors become toxic.

Lindsay proposed the theory

—which he admitted has not been scientifically proven—that the sudden release of latent heat, when ethylene glycol contacts dust particles, causes a flash increase in temperature. This kills the microbes riding on those particles, he believes.

Now Representing...

Acme Industries, Inc. — DAVE LEVINSON and WALTER BRODZ, both formerly manufacturers' representatives, have been appointed sales engineers for the St. Louis area.

York Div., Borg-Warner Corp.—SERVICE PARTS CO., Melrose Park, Ill., has been named wholesale distributor for Hydraline products.

Lord & Palmer, Inc. (Belding, Mich.) — MARZULLO FURNACE SUPPLY CO., Chicago, has been appointed Mercury Air Conditioning & Heating Div. distributor of self-contained, commercial, and residential air conditioners in that trading area. SALES ENGINEERING CO., INC., has been named Mercury distributor in northern Indiana.

Remington Corp. — Appointment of JOHN J. WOOD CO., New Orleans, as room air conditioner sales representative for Louisiana, southern Mississippi, Mobile, Ala. trading area, and the western tip of Florida has been announced. RAY WARRELL & CO., Cincinnati, was named sales representative in Kentucky, southern Indiana, southwestern Ohio, and western West Virginia.

John Wood Co., Heater & Tank Div.—JOHN Q. WOODRUFF has been named manufacturers' agent in Utah, Montana, Nevada, Idaho, and western Wyoming.

Skuttle Mfg. Co. (Milford, Mich.) —WILLIAM D. BOGH, La Mirada, Calif., has been appointed sales representative in California, Nevada, and Arizona for this automatic humidifier and washable air filter maker.

MATHES CO., INC. — **Mercury Distributors, Inc.**, Milwaukee, was recently formed and will distribute air conditioners in Wisconsin.

W. R. Hartin & Son, Inc., Columbia, S. C., has been named associate manufacturer for the 20 midland counties in that state for Mathes air conditioners.

KOCH ENGINEERING CO., INC.—Nine manufacurer's representatives of "Jet" forced draft cooling towers have been appointed.

Engineering Sales Co., New Orlearns;

Sales Engineers, Minneapolis;

Bishop Heating & Supply, Highland Park, Ill.;

Harry Alter Co., Chicago;

Harry Hadley & Associates, Marietta, Ohio;

Smallwood Equipment Sales, Toronto, Ont., Can.;

H. E. Culley & Co., Louisville, Ky.;

Loeffler-Greene Supply Co., Oklahoma City;

Heaven Engineering Co., Kansas City, Mo.;

General Power Equipment Co., Dallas.

BUENSOD-STACEY, Inc. — Appointment of two sales representatives has been announced.

Laurence Trant & Co., Norfolk and Richmond, Va., will handle air conditioning units in that area.

Lancaster May & Co., Baltimore and Washington, D. C., will represent the company in that area.

Actual Photo of "Budget-Blower" and Econo-Pak Assemblies in Our Dayton, Ohio Warehouse.

SPACE-SAVING AIDS TO GREATER PROFIT MARGINS

Here's How to Save Warehouse Space . . . Reduce Costs

LAU

Lau makes it possible for you to operate with greater economy and efficiency . . . even in these days of rising material and production costs. Our huge warehouse stock permits you to order from week to week . . . *in the quantities you need, in the sizes you require, for the production you estimate.*

Bulk packaging of hardware, palletized shipping and quick shipment from stock cuts warehousing and double-handling, cuts your inventory costs as much as 50%, assures your customers of firm delivery.

Yes, it is not unusual to expect box-car-to-assembly-line flexibility when you order from Lau. And too, the Lau staff of specialists in the air-moving industry will work closely with you on your air moving problems.

You enjoy greater economy, and simplicity of assembly with the Lau "Budget-Blower". Learn how you can build up your savings when you specify Lau. Consult your Lau representative today for details.

THE LAU BLOWER COMPANY
2027 Home Avenue, Dayton 7, Ohio
Azusa, California. In Canada: The Lau Blower Company of Canada, Ltd., Kitchener, Ontario

World's Largest Manufacturer of Air-Conditioning Blowers

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MARVIN L. "FERGIE" FERGESTAD
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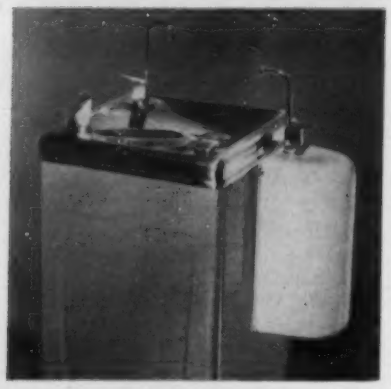
Add-On Hot Water Dispenser Converts Cooler

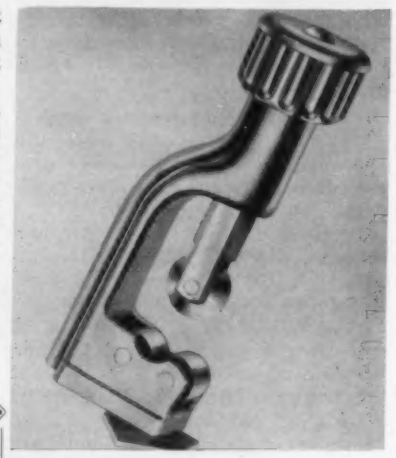


——KEY NO. G-630——

LIVINGSTON, N. J. — The refrigeration division of the McIntire Co., recently announced an "add-on" hot water dispenser to convert present pressure-type water coolers into combination cold-hot water dispensers, adapting them for mixing instant coffee, tea, hot chocolate, soups, bouillon, etc.

The packaged assembly lists at $49.50 and delivers up to 80 cups of hot water an hour at a temperature of from 195-200° F. The unit is easily added to the back or side of any pressure-type water cooler in a matter of minutes, using only four screws and a connection from the present water supply line. It also utilizes the existing basin and drain facilities, it was pointed out.

Each unit is equipped with an electrically controlled heater, adjustable thermostat, 6 ft. of electrical cord and plug-in socket, and a red nylon pushbutton type goose neck filler.



Unit Cuts Plastic, Non-Ferrous Tubing

——KEY NO. G-631——

ERIE, Pa.—A new "Pipemaster" tubing cutter for non-ferrous and plastic tubing and thin wall conduit has been announced by the Erie Tool Works.

To be known as the Pipemaster 1-T, this new tube cutter's range of operation is ⅛ to 1⅛ in. o.d. It is designed so that all cuts are straight and smooth without distorting the tubing out of round, and it will operate with minimum effort, the company stated.

Screw mechanism is enclosed in a precision-made casting so that it is clean and faster adjusting. The safety pivoted reamer swings back out of the way when not in use.

This new tubing cutter weighs 10 oz. and its over-all length is 4½ in.

Evaporator Pad Kit Aids Merchandising

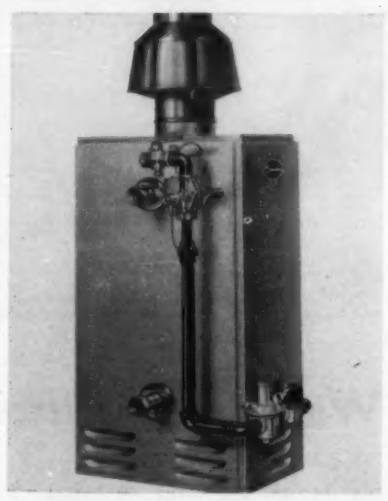
——KEY NO. G-632——

CHICAGO—A kit that is said to enable dealers to merchandise replacement evaporator pads or to let homeowners service their humidifiers was recently introduced here by Maid-O'-Mist, Inc.

Kit contains four evaporator pads and valve stem with float arm and is claimed to be simple for a non-professional to install. In the two kits, one contains four C-15 pads for 15-in. models, the other four C-18 pads for 18-in. units.

Quick Heat Response Claimed for Boiler

——KEY NO. G-633——



SOUTH FRANCISCO, Calif.—Versatile heat, sized for every need, is offered by "M/E Universal" hot water boilers, standard and swimming pool models, manufactured here by McIntyre Engineering Co., Inc.

Heart of the control system is the Robertshaw-Grayson gradual-acting thermostat. No flame contacts metal. All parts in contact with water are rust-free copper, brass, or bronze—metals that last a lifetime, it was stated.

Low water content (two quarts), coupled with all-copper construction, means quick heat response with hot water on its way in seconds, it was explained.

M/E Universals require from 2 to 3 sq. ft. of floor space, depending on the model, weigh only 120 lbs.

This compactness is ideal for installation in a small centrally-located closet or alcove. Shipped completely assembled, one man can install easily, it was reported.

The complete line, in four sizes, 80,000 B.t.u.; 110,000 B.t.u.; 160,000 B.t.u.; and 250,000 B.t.u. input for radiant heating, baseboard radiant heating, convector or radiator heating, combination use for both heating and water supply, and for booster service.

Gondolette Displays Large Meat Items

——KEY NO. G-634——

TRENTON, N. J.—C. V. Hill & Co., Inc. recently developed a gondolette for display of hams, butts, tongues, etc. at the end of a gondola.

New 460-XD "Gondolette" is a refrigerated end display unit, but can be used as a dairy or beverage merchandiser. It comes in add-a-unit construction of 5-ft. multiples.

Measuring 60 by 40 in., the gondolette is white porcelain and chrome with color-blend styling, adjustable, tilt-angle shelves and cascading forced-air refrigeration with automatic defrost, it was explained.

'Thru-the-Wall' Heater Vented Outdoors

——KEY NO. G-635——

NASHVILLE, Tenn. — Temco, Inc. recently began production of a new "Thru-the-Wall" vented heater.

Thru-the-Wall heater is a versatile unit that can be used for homes, motels, vacation lodges, and apartments.

The unit is vented outdoors directly through the wall, requiring no chimney or flue. Outdoor air is drawn into the unit for combustion, with no oxygen depleted from the room. Major installation costs are eliminated. To install, an 8-in. hole is cut through the wall, the unit is hooked up to the pre-engineered vent and the gas line. No electrical connection is required, insuring constant heat during a power failure.

Thru-the-Wall vented heater permits both zone controlled and perimeter heating.

More display in the same floor space!

Every inch of display space added to a food store means more profit. Warren's handsomely styled new MASTER MERCHANDISERS with Merchandising Canopies add display space *without increasing floor space by even one inch.* Not only is there maximum-cube frozen-food display, with seven packs front to back, but there are full-volume grocery shelves, too. Both shelves of Warren's Merchandising Canopy are adjustable to three positions, with a third shelf formed by the case top itself. These canopies are used with Warren's Master Merchandisers for meat and produce as well as the MULTI-CASE for frozen foods illustrated here.

For more detailed information about all styles of Warren Master Merchandisers, write, wire, or call . .

75th year Diamond Jubilee Series

Warren Refrigerators

P.O. BOX 1436, ATLANTA 1, GA.
EXPORT DIV.: 354 S. SPRING ST. LOS ANGELES, CAL.

Do You Need FLOOR UNITS for CHILLED WATER?

NOW—attractive water coil units for use in air conditioned space . . .

Immediate Shipments from Stock

MODELS
Complete units as pictured — for direct discharge with 4-way air distribution grilles.
Basic units, less top section, for ducts.

CAPACITIES
Three sizes — from 3 to 15 tons. Air delivery 1200 to 5600 cfm.

COILS
All copper or aluminum fins. Highest efficiency for chilled or well water.

FEATURES
Insulated cabinets. Heating with hot water or steam. Quiet operation.

HASTINGS AIR CONDITIONING The Fresh Air System

Water coil and DX air handling units—Up to 24,000 cfm. Shipments from Stock on All Sizes.

Write For Bulletin AC-67-W

HASTINGS AIR CONTROL, INC. 3215 Leavenworth Omaha 5, Nebraska

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised
(list name, page, and issue date)

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What's New or Current Literature Available

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Type of Business . . . . . .

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For more information about products advertised on this page use Information Center, page 26.

Aerosol Degreaser Removes Tars, Gums

KEY NO. G-636

MT. VERNON, N. Y.—Grease, oil, carbon, tar, gums, and similar difficult to remove substances can now be "easily, quickly, and safely" removed by a new aerosol degreaser that is designed for use by heating men for cleaning electrodes, pumps motors, and all types of electrical and mechanical parts, according to the manufacturer, Stewart-Hall Chemical Corp.

Spray "Zipp" on the area to be cleaned and wipe the object clean with a rag, or, if not electrical, hold it under a water faucet and rinse it off. It will also remove greasy, oily stains from painted surfaces and concrete floors, the firm said.

Zipp is said to dry rapidly leaving no film or vapor. It will not short electrical equipment, is noncorrosive and non-flammable, and is safe for painted surfaces, the company stated. It does not contain carbon tetrachloride. Packing is 16 oz. net weight per can.

Humidifier Has No Moving Parts

KEY NO. G-637

MINNEAPOLIS—A new "Cronco Mist-Master" humidifier which has no moving parts has been developed here by Cronstroms Mfg., Ins.

Installed for as little as $85 complete, operation costs of the unit are 1½ gals. of water per hour or about 28 cents a month, the company claims.

It is installed on present forced air heating systems by tapping into the upper air chamber or plenum, it was noted. Stale dry air is drawn through the intake to the humidifier chamber where a fine mist kept circulating constantly, is absorbed by the dry air. Air is then filtered through a special glass fiber before circulating throughout the different rooms.

Portable Winch Hoist Lifts 2-Tons

KEY NO. G-638

FT. LAUDERDALE, Fla. A 2-ton capacity portable winch hoist made of high tensile strength aluminum alloy castings has been announced by Aluminum Products, Inc.

Although of light weight it has an overload safety factor of approximately 100%, the company said.

Equipped with 25 ft. of preformed aircraft wire rope, it permits a lift or pull of 12 ft. double line or 25 ft. single line. Shafts and springs are of stainless steel, and the frame casting is designed to protect all working parts against damage, it was explained.

Easily carried or positioned by one man, it is priced at about $51.

Chuck Grips Threader Work Securely

KEY NO. G-639

WICKLIFFE, Ohio — A new chuck is now being furnished on all 2-in. Oster pipe and bolt threading machines which revolve the work, the manufacturer, Oster Mfg. Co., announced.

Known as the "Power-Matic," this new universal gripping chuck is operated by a hand wheel and requires no bars or tee wrenches to grip the work securely for cutting both right and left hand threads.

Jaws are brought down on the work by means of the handwheel automatically, without hammering.

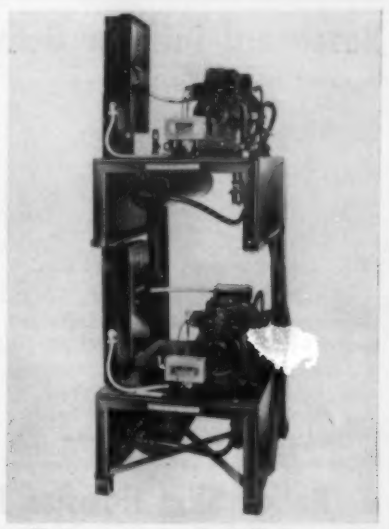
New chuck will grip all sizes of pipe from ⅛ to 2 in. and bolts or solid stock from ¼ to 2 in. It can be adapted to most 2-in. Oster machines already in use.

Designs Condensing Unit Assemblies

KEY NO. G-6310

ST. LOUIS—Hussmann Refrigerator Co. recently announced development of a new design in condensing units and condensing unit assemblies.

The new condensing units are compact in design. They are available in a full range of sizes—in air-cooled models from ¾ hp. through 5 hp. and water-cooled models from ¾ hp. through 7½ hp. Combination air and water cooled models are also available.



Units may be installed remote or they may be mounted on the Hussmann K-frame assembly. Units are mounted in "piggy-back" fashion with two units to each assembly.

A new type of control panel for mounting on the condensing unit proper, either remote or rack mounted, is available.

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Valves & Fittings

Bring you a dozen design advantages, plus experience since 1882, stock points in principal cities, and competent engineering assistance. Ask for new catalog: write

FRICK CO
WAYNESBORO, PENNA. U.S.A.

Are You Paying Premium Prices For Your Pipe Wrapping?

Compared With Thin, Non-Corrugated Wraps, NoDrip Tape Gives You Double Protection At Half The Cost!

THREE INSULATING BARRIERS *in* NoDrip® TAPE

1. OUTSIDE
Rough surface prevents free circulation of moisture-filled air—creates dead air barrier.

2. ¼-INCH THICKNESS
Built-in moisture barrier assures utmost insulating efficiency.

3. INSIDE
Dead air is trapped between "corrugated strands", forms added insulation barrier.

NoDrip Tape means more profit and customer satisfaction on every job . . . saves you time, labor and material. NoDrip Tape eliminates most multiple wrappings needed with thinner wraps . . . inferior wraps.

Why pay more when you can buy the handy 16 foot roll of ¼" thick NoDrip Tape at less than the cost of a roll of ordinary ⅛" wrapping?

Next time an equipment cold line job calls for *permanent* protection against condensation drip, "sweating" or frost, insist on using NoDrip Tape. Stops rust and corrosion, too . . . holds temperatures more constant and increases the efficiency of the cooling equipment.

NoDrip Tape is pliable, cork-filled and completely self-adhering. Easy to work with . . . forms an air-tight, 100% vapor and moisture proof jacket. Needs no tools, vapor seals, fasteners, brads or adhesives.

NO DRIP PLASTIC COATING... PROTECTION FOR BIG AREAS

For large pipes, tanks, air ducts, we recommend NoDrip Plastic Coating for permanent protection from condensation, rust and corrosion. Another fine Mortell refrigeration product, NoDrip can easily be applied by brush or trowel to metal, concrete, brick, plaster, tile or composition surfaces.

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Makers of Mortite Caulking Cord and Mortite Caulking Gum

Easy to Apply...
EVEN AROUND JOINTS, TEES, VALVES OR ANGLES

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520 Burch St., Kankakee, Ill.
O.K.! Send me full information about the complete line of Mortell refrigeration products.

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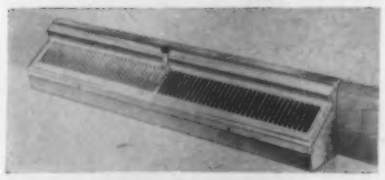
Baseboard Diffuser Delivers Fan-Shaped Pattern



—KEY NO. G-6311—

COOPERSVILLE, Mich. — A new, economy model baseboard perimeter diffuser featuring 34 sq. in. free area, "Air Sweep" styling, and two-tone finish is offered by Air Control Products, Inc. here.

Designated model 170, the new diffuser delivers a wide, fan-shaped air pattern which can be varied easily by adjusting the fins. Balancing damper can be set for any desired c.f.m. and resistance is very low, the firm said. The large free area adapts this diffuser for both heating and cooling installations.

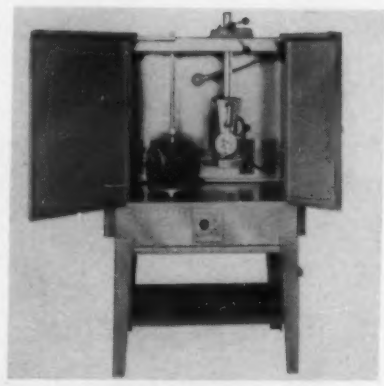
New baseboard unit can be installed on sub-floor and plastered in, or installed on finished floor. It fits 10 by 2¼, 12 by 2¼, or 14 by 2¼-in. ducts. Diffuser is 24 in. long, 4 in. high, projects 3 in.

Roller Skid Handles 1,000-6,000 Lb. Load

—KEY NO. G-6312—

PORT WASHINGTON, N. Y.—Recently developed by Stokvis-Edera & Co., Inc. was the "Multiton Jr." roller skid.

Able to handle loads from 1,000 to 6,000 lbs., the unit is 2⅝ in. high. Of all steel construction, it moves on three 2¼-in. diameter rollers each equipped with neoprene-sealed ball bearings. Dolly weighs 12½ lbs.



Hermetic Compressor Opener Base Added

—KEY NO. G-6313—

NEW YORK CITY — Frankell Mfg. Co., Inc. recently announced availability of a newly-designed heavy-gauge welded base, with storage shelf, for use with Frankell's hermetic compressor opener. The base is available at $37.50.

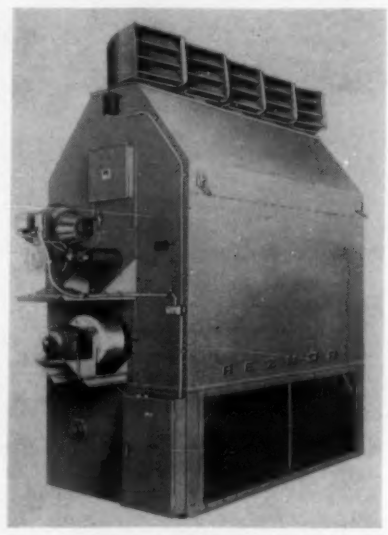
Frankell's hermetic compressor opener is claimed to open any shape compressor up to 20 in. in diameter regardless of the location of the weld. The sturdily constructed base insures positive stability for the opener when it is in use and eliminates the need of using valuable table or bench space for it, the company said.

Direct-Fired Space Heaters Developed

—KEY NO. G-6314—

MERCER, Pa.—A series of large stainless steel direct-fired space heaters, with individual unit capacities from 400,000 to 2,000,000 B.t.u., has been added to the line of commercial and industrial heating equipment manufactured by the Reznor Mfg. Co.

New units may be equipped with gas, oil, or dual fuel burners and operate efficiently with fuel oils through No. 5 grade, or natural, mixed, manufactured, or LP gas. Combination gas-oil units can be supplied with interchangeable burners or with a single burner



that can be adapted for the second fuel by merely flicking a switch.

These heaters can be installed for top, bottom, or horizontal discharge and are easily adapted for use in duct systems. When installed without ducts, multiple individually-adjustable discharge nozzles with adjustable horizontal louvers allow precise control of the air distribution pattern, the company said.

Other features include a "floating" stainless steel heat exchanger which eliminates the possibility of damage due to contraction and expansion and four-pass design which produces exceptionally high efficiency in heat transfer.

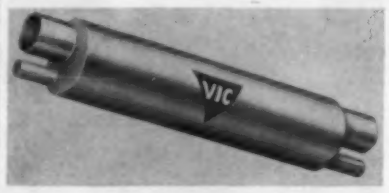
Multi-Orifice Ceiling Diffuser Offered

—KEY NO. G-6315—

MONROVIA, Calif. — Introduction of a new "MO-MJ" ceiling air diffuser for modular installations in tile ceilings has been announced by Air-Factors, Inc.

Multi-orifice, multi-jet diffusers were designed to permit flow of conditioned air through openings that blend into modern architectural treatment of ceilings, the company explained. One, two, three, and four-way proportionately balanced air distribution systems are available with this new outlet, with one the job adjustment to air flow discharge angle possible after installation, it was noted.

Required air volumes at engineered velocities may be delivered through custom size outlets that match standard ceiling tile construction and span any modern "T" bar suspended structure. Outlets are available in all square and rectangular sizes, it was added.



Has Heat Exchanger For Beverage Vendors

—KEY NO. G-6316—

MINNEAPOLIS—Especially designed for the vending machine manufacturer is "Vendex," created by the Vic Mfg. Co.

Vendex is a small, low-cost, heat exchanger for specific use in machines that dispense cold beverages. Features of this unit, according to the manufacturer, are the small over-all size, stainless steel construction, and large storage or "hold-over" capacity which the company characterizes as unusual.

MORE HORSEPOWER . . .

in an Economical, Compact, Lightweight, Quality Package

NEW Redmond AL-4 MICROMOTOR

ACTUAL SIZE

Designed for a Wide Variety of Applications . . . or can be Tailor-Made for Specific Requirements

Here is a motor designed and styled to meet the modern demands for motors that are smaller and lighter, and yet have increased output. It is ideal for heating, ventilating, air conditioning or refrigeration equipment, for appliance applications, and for business and vending machines, pumps, tape recorders, and dozens of other applications.

The basic AL-4 is a 4-pole motor, 1550 r.p.m., 115 volts, 60 cycles, available in odd voltages and frequencies. The normal horsepower range is 1/250th to 1/15th. It incorporates two famous Redmond design features that have never before been available in a small diameter motor:

1. The patented Redmond Tri-Flux® design that greatly increases starting and running torque and improves efficiency over conventional small diameter motors;
2. The Uni-Cast® construction that gives a rigid, lightweight motor that can be manufactured to extremely close tolerances.

Because with Uni-Cast construction the stator core frame is precision die cast in one piece, the registers are machined concentric to the bore to extremely close tolerances. The exact bearing alignment and uniformity of air gap achieved with this precision manufacturing result in a motor that is whisper-quiet in operation and can be depended on to give years of trouble-free service.

Casting the stator core frame in one piece not only makes the motor most rigid, but it is light in weight, as a very durable and lightweight metal is used.

This modern motor can save money on a host of applications. If you are looking for a motor in volume quantities, send for the literature described below.

SEND FOR COMPLETE PERFORMANCE DATA

For the complete story on the new AL-4 motor—dimensions, performance, operational data, and suggested applications—write for the "AL-4 Bulletin."

The Standard of Dependability

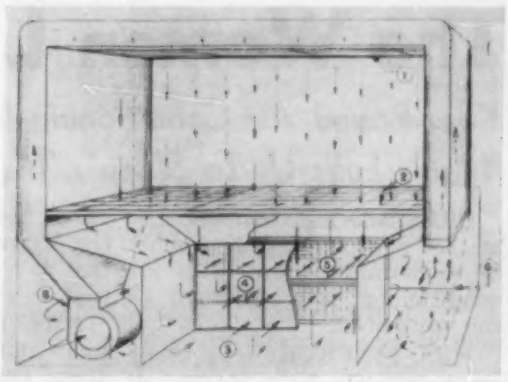
Redmond COMPANY, INC.
OWOSSO, MICHIGAN

ADVERTISED IN The Saturday Evening POST

THE BIG NAME IN SMALL MOTORS

'Doorless Door' Curtain of Conditioned Air Offered for Contractor-Installation

SMILING behind "Doorless Door's" air screen, model demonstrates how Sulzer Bros.' installation protects and insulates interior of buildings against all outside weather conditions. "Snow" from CO_2 fire extinguisher bounces off air screen.



HERE'S how the "Doorless Door" operates: through a series of adjustable vanes located in the ceiling grille (1) a curved beam of air is sprayed. The airflow, directed downward, is sucked through a floor grating (2) that runs the full length of the entrance.

Prevents Loss of Heated, Cooled Air

NEW YORK CITY — The "Doorless Door," a curtain of circulating conditioned air, Swiss engineered and designed by Sulzer Bros. here is appearing in banks, supermarkets, and other business places here and abroad.

The custom-built Doorless Door, according to a company spokesman, can be installed by air conditioning contractors under the supervision of Sulzer Bros.

The company announced it will soon introduce a ready-made package unit for installation in a variety of business enterprises. Local contractors can buy the package unit and install it with no factory supervision.

INVISIBLE SCREEN FILTERS DEBRIS

Norbert A. Zehnder, chief engineer of the firm's Doorless Door Div., explains that an invisible, hardly detectable screen of air moves slowly down from a grille across the top of the doorway, and is drawn through a grating in the floor. The air, according to Zehnder, carries with it particles of dust and dirt, rain, snow, etc., and this debris collects in a sump beneath the grating, which is washed out automatically every hour or so.

The air is drawn out through filters located in the side wall of the sump, heated or cooled to a few degrees above the inside temperature, and recirculated at low velocity through ducts to the grille above the doorway.

In some installations, heating or cooling system return air is circulated over the entrance opening and through the filters, Zehnder asserted.

'WON'T DISTURB MILADY'S HAIR'

It is claimed that the air velocity is low enough that it will not disturb a lady's hair or even a feather on her hat, but the air flow, in combination with the floor grating, discourages animals from entering the building.

Costs of a Doorless Door installation run from $150 to $250 per sq. ft. for new buildings, while existing buildings the figure is about 15% more. Electrical costs per annum average $45 and maintenance costs are comparable with that of a similar capacity ventilation system.

Advantages claimed for the Doorless Door, from a retail business standpoint are: effectively creating impulse buying; eliminating accidents caused by swinging and revolving doors; reducing insurance costs; preventing loss of heated or cooled air, as though the door remained closed; providing a clean entrance at all times, free of ice and debris.

The Knickerbocker Federal Savings & Loan Association has installed a Doorless Door in its main entrance at 722 Lexington Ave. here. Permanent filters are used and fully automatic operation is provided in the installation.

Doors for night lock-up are installed at the outside of the air curtain, it was pointed out.

It is stated that under certain extreme weather conditions these doors are in use along with the air screen, and air that gets past the doors is prevented by the air curtain, from entering the building.

The Acme supermarket in Cheltenham Township, Pa., a suburb of Philadelphia, is equipped with a Doorless Door. The "open door" policy is maintained during business hours and aluminum and glass doors slide into place and are closed and locked to prevent "off the record" visitors, it was explained.

The company source stated that the Doorless Door has been installed in Zurich, Lausanne, Geneva, Hilversum (the Netherlands), Melbourne, and Tokyo. It was introduced in an office building in Zurich, Switzerland,

Air Conditioning, Ordering, Installing,
Maintaining – Now Made Easier For You . . .

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It's our way of telling the world that Governair Products are guaranteed to satisfy the widest range, the most exacting capacities, and the most truly unusual space requirements.

Governair offers a SPECIAL saving of time and trouble with its complete line of Self-Contained Units. They're easier to order, since you specify only one unit in place of picking several components. Easier to install, too, since they are delivered fully tested and ready to operate with simple electrical, water and duct connections.

Best of all, Governair's quality engineering and construction assure you of lower cost maintenance so important to the purchaser.

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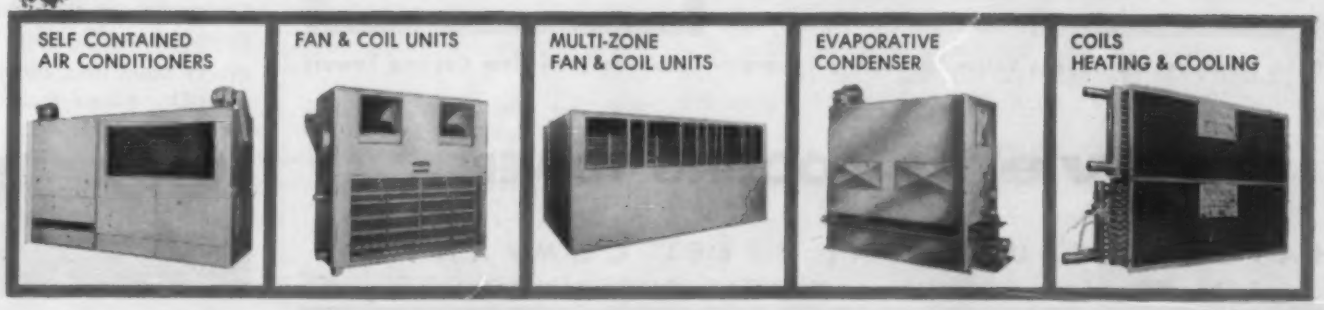

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Speedy, dependable, world-wide service.
Air Conditioning and Refrigeration parts, equipment, supplies.
Write for Wholesale Catalog No. 57

AIRO SUPPLY CO.
2732 N. Ashland Ave., Chicago 14, Ill.

The Women Like It—*Part 2*

Year-Round Air Conditioning Is Approved Because 'Dog Likes It Too'; 'Noise Lulls Us To Sleep'; 'It's Comfortable Because of Being Drier'

If you have any connection with the residential air conditioning field, we're of the opinion that the material which is published starting on this page is virtually MUST reading for you.

It consists of excerpts from the verbatim report of the Lennox Women's Forum. Members of this forum comprised housewives who have lived in homes with central residential summer air conditioning. They answered questions and volunteered statements about what they liked and found fault with in complete home comfort cooling.

What these women who have sampled the benefits of air conditioning in the home have to say about it would be worth reading if only for the boost it should offer to the spirits and confidence of those in the business. But it should also prove a most effective sales tool for those who wish to put it to work in that manner.

The first instalment appeared in the June 10 issue. The next instalment will appear in the next issue of the NEWS.

PRESIDENT NORRIS: Let me see now. I know there must be something wrong with air conditioning, is it too noisy or too expensive?

MRS. PINCHUK: It is really good, but you have to pay all year around on the water bill. You have to pay just as in summer and it is kind of expensive.

Of course, the first time I didn't know that. I went to the City Hall and they told me I had to pay all year around because it is a luxury, although you only enjoy it four months. You really pay a lot, winter and summer. That is a bad feature about it. Even if you don't use it, you pay just the same.

MRS. MITTY: We have an outlet from the outside, from the basement. We have found that is very fine in the winter time to supply fresh air.

MRS. FAYE ALYCE MITTY, Skokie, Ill. "... that is very fine in the winter time to supply fresh air."

MRS. BRANDT: I have two small children. I have wondered about the effect of running in and out of the house in summer, in a 20° temperature change. Our children had many colds last summer, and I am afraid I worried about the fact that we had been using our air conditioning all day.

MRS. NORDBERG: I am from Western Springs. I think you are having your air conditioning too cold, if you are running it 20° difference.

MRS. BRANDT: We set it about 72, and on the 90° days, that is 20°.

NORRIS: Have you tried setting it up some?

MRS. NORDBERG: We keep ours about 78° and we enjoy it because when it is real warm outside, it is not a shock to come into the house.

Regarding the air-cooled device, we have ours outside the window of our basement. We have the ducts inside. At first, when we put ours in, it was noisy. The man that installed it, of course, works with us and finally he put something in that was more of a silencer, but we like the noise, in a way, because it lulls us to sleep at night.

Another thing, our dog really enjoys it because he doesn't want to stay outside.

MRS. WENGERHOFF: Talking about dogs, we went to see the pediatrician to see what his comments were. He said, "Those lucky children. May I move in? If you keep the temperature between 12 and 15° cooler than it is outside, they will have no ill effects. It has been proven in our family."

MRS. WINER: If we keep the interior temperature about 10° that is quite enough, because the air is so much drier that you don't need it so cool as much as you need the humidity less.

NORRIS: You are satisfied with no more than that?

MRS. WINER: Yes. We find we are very sensitive to increased changes, and we can't keep it any cooler than that. After you are in a while you don't realize how much better it is inside because the temperature isn't as cold, but it is comfortable because of being drier.

NORRIS: As time goes on, circumstances change. As you

(Continued on next page)

Havens

COMPLETE LINE OF PERFORMANCE PROVED COOLING TOWERS FOR EVERY TYPE INSTALLATION

HOT DIPPED GALVANIZED After Fabrication

MODEL 33-7.5

RESIDENTIAL and SMALL COMMERCIAL INSTALLATIONS 3-15 TON

Small and compact, this tower has pan cover, expanded metal inlet screen and expanded metal fan screen. The motor and fan are recessed and hot water enters rear of distribution pan. Slow speed fans insure quiet operation. Easily disassembled if necessary.

MODEL 33-40

LARGE COMMERCIAL AND INDUSTRIAL INSTALLATIONS 20-60 TON

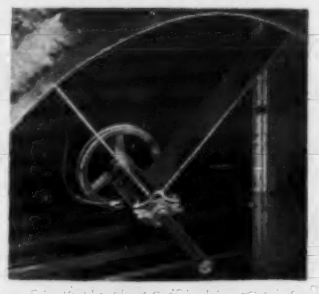
Constructed for easy disassembly, this tower has as standard features a fan screen, belt guard and weather-protected motors. Accessory items at a slight extra cost include a pan cover, expanded metal inlet screen and motor cover.

80-150 TON

HEAVY DUTY INDUSTRIAL INSTALLATION HAVENS VERTI FLOW 80-150 TON

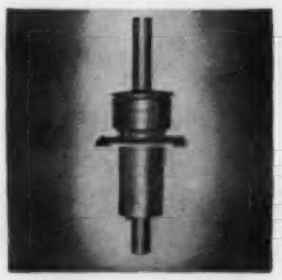
As modern as today's architecture, the low, sleek lines of the Havens Verti Flow Towers blend with building outlines. Fans are all aluminum – variable pitch—and sheaves are corrosion resistant cast iron. Shipped assembled. Also available—175 and 200 ton Verti Flow models—shipped in 3 sections.

OUTSTANDING PERFORMANCE MINIMUM MAINTENANCE WITH HAVENS LONG LIFE BEARING DESIGNS



33 SERIES BEARING

Porous bronze bearings in zinc-plated cast iron housing. Stainless steel fan shaft. Extra large oil cup.



VERTI FLOW BEARING

Bearing assembly is supported by heavy structural members. All parts are corrosion resistant.

Write for FREE brochures on Havens Series 33 Cooling Towers and Havens Verti Flow Cooling Towers

Havens COOLING TOWERS

Division of

HAVENS STRUCTURAL STEEL COMPANY

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When manufacturers talk about filter-drier quality, fair questions are "What is it, and how did it get there?"

With the Remco Super-Flo, quality is (1) massive depth filtering to remove foreign particles, (2) peak drying efficiencies even at 150° F liquid line temperatures, (3) acid control, and (4) no measurable pressure drop.

The quality got there through mass manufacturing procedures which also dropped Super-Flo prices to the lowest in the industry.

Proof? More than 100 manufacturers in your industry specify Super-Flo Filter-Driers as original equipment. If you want the full story, write for prices and Bulletin R-11.

AVAILABLE TO THE TRADE THRU WHOLESALERS EVERYWHERE

REMCO INC.
ZELIENOPLE, PA.

For more information about products advertised on this page use Information Center, page 26.

'Everyone (Especially Mother) Is More Quiet, Calm'; 'Same Power Bill All Year'

(Continued from preceding page)

drive to and from work in air conditioned cars and work in air conditioned space, the chances are you will want to widen that differential to 15° instead of 10, but the equipment has the ability to do it, and all you need to do is set the thermostat to accomplish it.

MRS. WINER: Not to change the subject, but going back to entertaining, most of my friends have told me not to entertain in winter months, to please entertain them in the summer. Up until we got that air conditioning, very few people would want to come over. They would want to bother getting dressed, but now they don't mind. They enjoy coming over and staying in an air conditioned home. That is when we do our entertaining now.

NORRIS: When you are speaking about entertaining in the summer time before you had air conditioning, did you seek relief from the heat by going to a nightclub more frequently, or the movies more frequently?

MRS. WINER: No, but we sat under our sprinkler out in the yard and fought the mosquitos.

MRS. BAUMEISTER: Maybe out in Newton, Iowa, the men all take care of the appliances, and the gadgets around the house, but I think in the Chicagoland suburbs it is a fair guess that a pretty good percentage of we women have to know which button to turn and whether to plug or unplug.

CAN'T REMEMBER WHICH BUTTON TO PUSH

Robinson Furnace installed our heating and air conditioning equipment. I am sure they have been out a dozen times to point out a little button in here that I turn on such and such a date, and when they are gone 48 hours I have forgotten which one it is.

Why couldn't you have some sort of a system, like typewriting keys, to number them or color them, and then have a decal on the outside to say, in summer, turn the red button, and in winter time the blue one or the white one?

MRS. BAUMEISTER: Because there are so many things to remember in the course of our lives, you know, that this button in here just doesn't seem important until it is time to do it.

MRS. BAUMEISTER: This is on installation. When Robinson Furnace put ours in, they said it was the first two-story home they had done and we had problems on the second floor. The cold air came along the floor and went down the cold air duct. There was no place for it to go.

MR. STAHLER: I doubt very much whether the high ones on the first floor would help her situation any, and none whatsoever in operating cost.

Their problem on the second floor was having three bedrooms, the bathroom, and the second floor hallway, and there was no problem in that respect, but it was getting that heated air off the ceiling level of the second floor rooms.

MRS. FRISBIE: We have the 3-ton air-cooled condenser, and that was one of the things my husband felt was one of the good things about air conditioning. Everyone has spoken of its being expensive, but we felt that it was one of the most inexpensive things we ever had done to add comfort conditions to our lives.

I would like to say that we have a boy who is of a very nervous disposition. He is taking tranquilizers, and we hope that he will outgrow this condition. It is a brain injury.

BETTER FAMILY ATMOSPHERE

In summer time now, our house is so much more quiet and calm, it seems to me that people don't throw things around as much as they did. It is more quiet and it is a much better atmosphere for the whole family.

MRS. P. L. BRANDT, Wilmette, Ill.: " . . . I have wondered about the effect of running in and out of the house in summer, in a 20° temperature change. . . ."

NORRIS: Everyone is more calm in the house?

MRS. FRISBIE: Yes, especially Mother. If you speak of tempers, it is Mother who gets frayed at the end of the day.

JOE WERESCH, *Chicago Daily News:*

I would like to get an idea from several of the women as to how much this costs during the peak summer months and the winter months and averaged out over the year, just to get an idea of what it would be.

MRS. FRANKS: I keep accurate records of the weather throughout the year. I have the weather records going back 20 years. I have kept a record of all these zero days, and the cost of the oil before the installation of the Lennox heater and air conditioner. I also record summer temperatures.

We found that the saving on the oil, with the new oil burner over the old one, pays for the power bill for the air conditioner in a hot summer.

NORRIS: What is your power bill for air conditioning in, say, July or August?

MRS. HOMEYER: It is the same.

PRESIDENT NORRIS: The 12 months out of the year?

MRS. WENGERHOFF: I asked my husband and he told other people who are having air conditioning it is the same cost, heating your house as cooling your house.

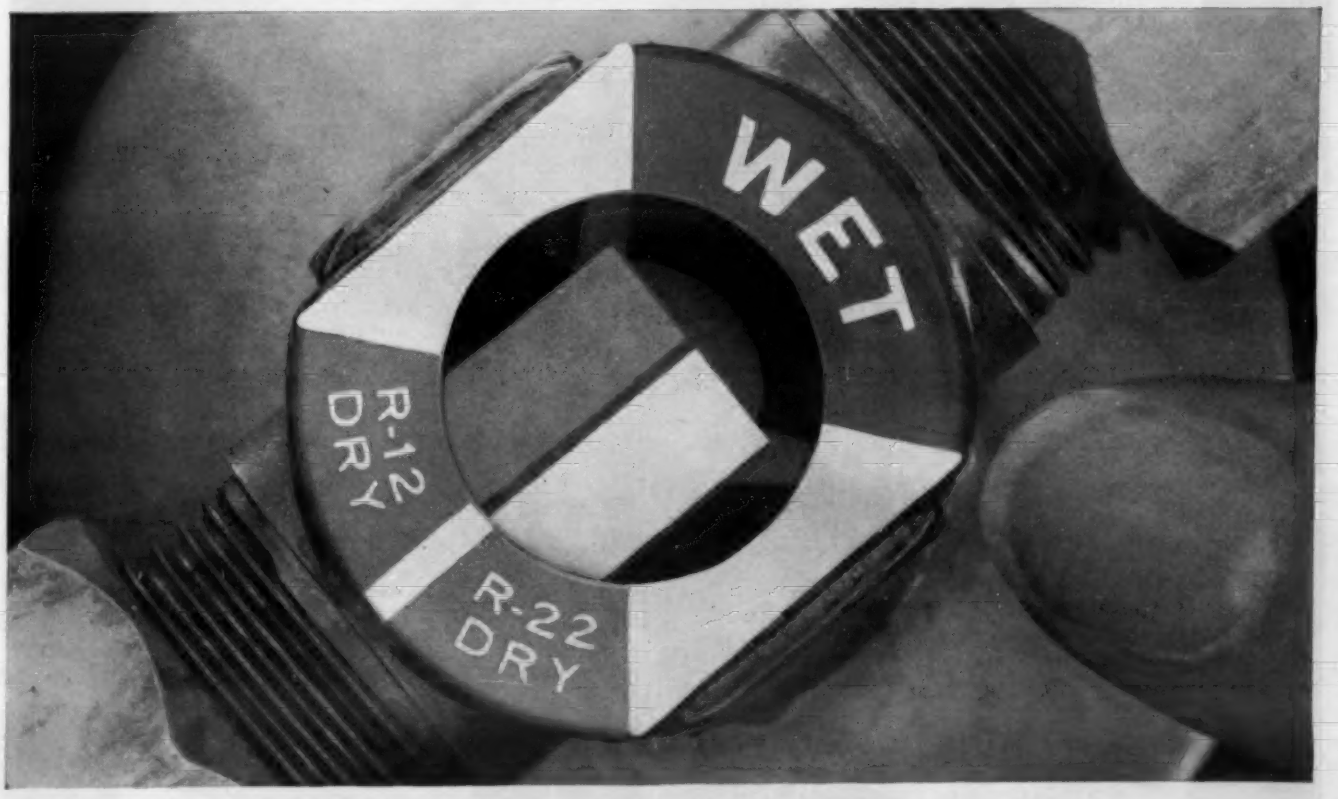
MRS. LINTON: Two years ago when we had it installed, our electric bill—we have the water cooled—was $25 a month more. So for the two hot months—and it was on most of the time—it cost $50, which some people might consider high, but it is comfortable.

NORRIS: Is yours a three or

(Continued on next page)

IT'S HERE!

The world's first moisture indicator with a built-in sight glass. The new ANSUL SUPER DRY-EYE tells you at a glance if the refrigerant is dry or dangerously wet, and lets you see the condition of the refrigerant. Here are the four big servicing questions the super DRY-EYE answers for you scientifically!



Q. If I am using Freon-12 how will I know if it is dangerously wet or dry?

A. Just look through the big window at the R-12 indicating element. If it is blue the refrigerant is safe; less than 10 parts per million of moisture present. If it is pink, moisture has climbed above 30 ppm—time to change driers.

Q. If I use Freon-22 in a system how will I know if it is wet or dry?

A. If the R-22 element is green your refrigerant is in safe operating condition—less than 20 ppm of moisture. If the element shows pink, moisture has reached the 25 ppm level; time to change driers and avert a costly breakdown.

Q. Will the Super Dry-Eye tell me if there is a low refrigerant charge?

A. Yes. The fused glass window, the first proven *leak-proof sight glass* in the industry, permits visual inspection of the refrigerant at all times. Bubbles indicate a low refrigerant charge or a possible restriction in the line.

Q. Is there a simple, economical way of correcting the problems which the Super Dry-Eye tells me about?

A. The T-fitting which houses the Super Dry-Eye can also serve as a connection for an Ansul T-Flo drier without an additional break in the line. The drier screws in like a light bulb and hand tightening gives a leak-proof seal.

The Ansul Chemical Company, Marinette, Wisconsin

ANSUL

'Didn't Find Very Expensive In Summer'; One Problem: 'Everyone Comes To Enjoy It'

(Continued from preceding page)

four-bedroom house?

MRS. LINTON: Three-ton unit, and we have a three-bedroom house.

MRS. WINER: We have a four-bedroom house with a two-ton unit, 2,200 sq. ft.

We figure that for the six of us—at that time it was seven—it was approximately $1 a day during the hottest time.

NORRIS: For the air conditioning?

MRS. WINER: Yes. That is approximately the same amount of money that it costs to heat our house.

MRS. MITTY: Well, we found that the electricity as far as running the air conditioning, amounted to about approximately the same as running the furnace. With the summer days, there is very little difference in what we paid during the winter for the electricity, but we didn't find that it was very expensive during the summer because we used so much water for our sprinkling.

That is one of the things that we think saves an awful lot.

We figured that it ran, I think, about $15 during the three-month period, than it did the year before when we sprinkled.

MRS. RITZENTHALER: I am from Evergreen Park. Our air conditioning bill for the summer time is less than our heating for the winter, probably to some extent due to the fact that we have cool shade screening on the west and south sides.

MRS. WENGERHOFF: The only problem that we have, when we first got the air conditioner, everybody in the neighborhood came in. My husband said, "Do you think if we made popcorn and turned on the TV that we could sell tickets?"

NORRIS: How about kids running in and out and opening the doors? Does that upset the routine?

MRS. HOMEYER: I have plenty of boys running in and out and I yell to shut the door because they leave both doors open, front and back, so we can't have the doors open.

MRS. WINER: We keep our storm doors and windows on all summer. The doors close by themselves, otherwise I would be in trouble.

MRS. LAKOUTA: Ours is just a foot away from the building proper; it is far removed from the bedroom as possible. There is aboslutely no noise heard at night, and even outside the dining room window where it is working, you don't hear it.

MRS. FRANK J. LAKOUTA, Glen Ellyn, Ill. ". . . absolutely no noise heard at night. . . ." (At right) MRS. A. E. WINER, Chicago ". . . because it would be like an oven. Of course, the air conditioning took care of that."

NORRIS: Your windows are closed?

MRS. LAKOUTA: We have all Thermopane windows, but we don't hear it inside.

NORRIS: What about your neighbor? Does your neighbor complain about the noise?

MRS. LAKOUTA: I don't have a neighbor very close.

MRS. MACNIDER: Our neighbors say they can hear us, but it is not disturbing. They can hear it, on and off. If they happen to be awake they can hear it, but they do not find that it disturbs them at all.

MISS DOUGLAS: *(Chicago Tribune)* I have been wondering what some of the women who have air cooling towers and other installations in their back yards are doing about disguising them. I have never seen one that was particularly handsome.

MRS. FRANKS: I have mine nestled underneath a pine tree right under my dining room window. I am one of these vice presidents in charge of all the buttons and gadgets, and I wasn't sure that it was operating so I went out there and took a ribbon and tied it on to the blower so that I could see it blowing and know it was working.

MRS. LAKOUTA: In the winter time we covered it with a piece of canvas to match the color of the house. In the summer time I have flowers growing all around it and the color isn't obnoxious at all.

I don't think that it defaces the premises at all.

MR. TRUCK: *(Homemakers Magazine)* I would like to ask some of the women what prompted them to buy air conditioning, what motivated them?

MRS. WILBOR: We live quite close to the lake and we have a great many trees. I wasn't interested in the cooling part of the system at all.

All they were thinking about was the cooling, but I wanted the amount of moisture taken out of the house. This won't even seem possible, but being close to the lake, I used to have at the end of the summer almost all my carpets cleaned just because of the mildew.

MRS. WILBOR: I was about ready to have a lot of trees cut down, which I didn't want to do, and now it is just perfect.

MRS. WINER: My husband is also a physician and he finds his days and nights slightly confused. I was able to cool the house by using it, by bringing up cool air from the basement to the attic.

However, I would have to block out the bedroom and that didn't appeal to him because it would be like an oven. Of course, air conditioning solved that.

MRS. LINTON: I just get plain irritable and miserable when I start to perspire, and therefore that was the only reason I wanted air conditioning, just to cool off. I am very hard to get along with when I start getting warm. I could feel that upper lip with a few beads of perspiration and I started reaching out for the children.

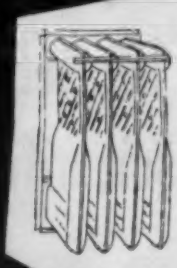
NORRIS: And this has cut down on your psychiatric bill, too, hasn't it?

MRS. LINTON: Tremendously. He comes to our house now.

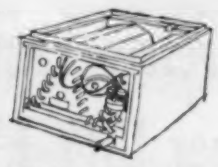
(To Be Continued)

6 reasons why Residential Heating & Air Conditioning Dealers say...

"Fraser-Johnston is the best package in the industry."

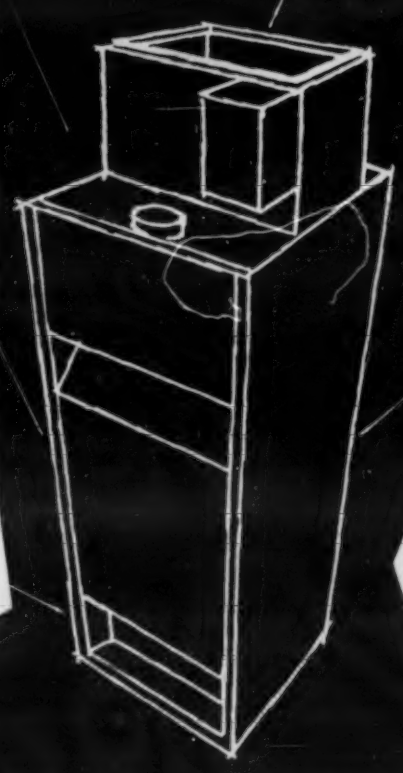


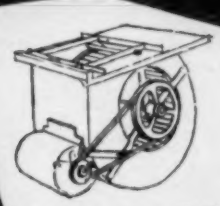
Updraft streamlined heat exchanger. No internal baffles, no hot spots, no pockets for condensation. Die-formed, completely welded construction.



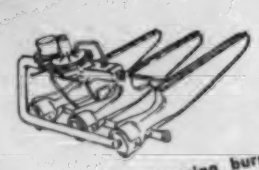
Matching, inter-lock coil evaporater for cooling.

Casing, foil and fiberglass lined for cool, quiet efficiency. Assembled and wired at factory, all service from front.

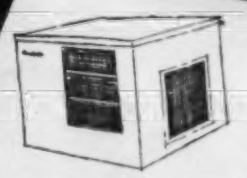




LARGE 13-inch diameter wheels on belted drive models for large air handling capacity, quiet operation. Blower motor suspended by rubber.



Long-life, non-clogging burners with built-in aspiration, for all gases, including L.P.G.



Model A-17 remote air cooled condenser — large hi-capacity blower for quiet operation.

Most Fraser-Johnston Furnaces are high static approved by A.G.A. for .6 w.c. Basement, upflow, counterflow and horizontal models. For complete engineering data, price lists, and available territories, write:

Fraser-Johnston

OVER A QUARTER CENTURY LEADERSHIP

1900 - 17TH STREET • SAN FRANCISCO, CALIFORNIA

For more information about products advertised on this page use Information Center, page 26.

'Keep an Eye Peeled'

Roadside Stands Offer Refrigeration Dealer Prospects For Ice Cream Mixer, Freezer, Air Conditioning Unit Sales

ALLENTOWN, Pa. — "A refrigeration dealer who keeps his eyes open, spotting roadside refreshment stands being built, has a splendid field for sales of soft ice cream mixers, ice cream freezers, air conditioning equipment, and related units," says E. B. "Pete" Mires, specialty salesman for Ace Refrigeration Co. here.

"Each spring and summer new groups of small businesses open along the roadsides," he continued. "Many are small drive-ins and refreshment stands. They frequently enjoy a good sales volume for their size and investment, and they are mushrooming everywhere."

By assisting people in opening their roadside refreshment stands, Ace Refrigeration boosts its business in that field.

'Sooner or Later Stands Expand'

"Soft ice cream is the main item sold by these stands," Mires said. "Sooner or later, they add many other food items which makes them excellent prospects."

While roadside stands may start with only a soft ice cream mixer and an ice cream cabinet, they subsequently add other units, he explained. "Once we have helped them get started in business and have made the first sale to them, we keep right on making sales."

3 Sources of Leads

Mires has three main sources of prospect leads. First is that all salesmen working for Ace, in covering their territory within a 60-mile radius of Allentown, spot many stands in the construction stage, or in many other ways learn one is to be built. Second comes from walk-in traffic at the company's office. Third results from placing classified ads in the newspapers.

Since regular refrigeration equipment salesmen don't have time to follow-up leads, all are turned over to Mires. When sales result, they get a commission.

"In more than half the cases of ice cream unit sales we work with the customer at his stand from the time ground is broken until it opens for business," Mires disclosed.

"We can draw from our experience in preparing plans for them, will drive the customer around to see other soft ice cream outlets, and work hand-in-hand with the contractor to see that all plumbing, electrical equipment, and piping work is done properly to handle current equipment installations and the possibility of future additions. This paves the way for later sales to our customers."

Rely on Refrigeration Salesmen for Advice

Those opening soft ice cream outlets are chiefly inexperienced in that line, Mires indicated, so they rely "a great deal on the refrigeration salesman" for assistance in helping make their venture pay off.

Mires claims that "every person whom he has had a hand in helping get established" is still "profitably in business," and some have opened more outlets.

He checks motor or foot traffic so his customer gets the right location. In addition, he makes sure there are adequate parking facilities, and suitable signs are posted.

Mires believes refreshment stand attendants must know portion control—how much of a product to sell for a given price and how to prepare the various items dispensed.

He says that the price of a gallon of soft ice cream or custard is determined by weight so the dispenser knows that a 3½ or 4-oz. plate or cone should be sold for 10 cents. From 6½ to 7 oz. should bring 20 cents.

"From the very start," he said, "we try to interest the customer in two large size mixers that produce from 20 to 25 gals. of soft ice cream an hour. This enables them to handle rush hour periods. Each mixer handles one flavor.

"We point out to the customer that sales of soft ice cream are timely. If he expects to do a profitable business, he must make 'money while it is there to be made.'"

Ace Refrigeration requires a one-third down payment on all equipment sold. In some cases, it was noted, the customer starts with only soft ice cream mixers and adds more equipment later. Last year, Mires' sales of soft ice cream mixers and ice cream freezers to refreshment stands hit $12,000.

After a sale, Mires keeps close contact with the customer and helps him develop year-round business. He pointed out one particular operation he assisted to make into a 12-month business.

Suggests Heating, Air Conditioning

Averaging $200 a day in season, this outlet had a 5-ft. overhang encircling the building. Mires suggested the space underneath be enclosed for inclement weather protection. This was done and a space heater installed.

In addition, Mires sold the stand operator two 5-ton air conditioners, placing them at opposite sides of the enclosed overhang.

"That customer now does an all-year sales job and has increased his sales volume in warm weather as well."

SALESMAN Peter Mires shows a refreshment stand operator how the addition of an air conditioner in the enclosed section of a soft ice cream outlet can promote customer comfort during hot summer.

DEALERS! Here's new profit for you!

A SCOTSMAN DRINK DISPENSER

that makes its own ice!

ANOTHER SCOTSMAN FIRST!
Handy Waist High Ice Opening!
Built-In Brand Name Carbonator!
Models for 350 or 550 lbs. of Ice Daily!
Storage Room for bulk syrup, cups, straws!
Big Counter and Drain Space!
Any Combination of Dispensing Heads!

BE FIRST TO PROFIT from this exclusive Scotsman unit! It's the combination drink dispenser and ice machine that fits any customer's need!

SELL YOUR BIG CUSTOMER! Sell your small accounts! Put in a single unit or arrange in multiple banks!

Install at either front or back counter. Simple to use . . . ideal for young, inexperienced help.

GET ON THE PROFIT BANDWAGON with Scotsman! Send for complete details on the exclusive Scotsman drink dispenser that makes its own ice!

AMERICA'S MOST SPECIFIED LINE OF ICE MACHINES!

Yes— ***Rush new literature and complete details on the Scotsman combination ice machine and drink dispenser!***

NAME_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

Mail to: American Gas Machine Co., Division of Queen Stove Works, Inc. 206 Front Street, Albert Lea, Minnesota

Capitalizes on Showroom

Dealer Pushes Used Equipment Sales to 15% of Gross By Applying New Fixture Merchandising Techniques

HOUSTON, Texas — Because the firm applies basically the same principles to the merchandising of used commercial refrigeration equipment as to new fixtures, S. E. Teaff Refrigeration here is turning over from $75,000 to $150,000 additional volume per year, it was reported.

In 1955 when Teaff sales went over the million dollar mark, the Houston Friedrich dealer did 15% of its gross volume in used fixtures, or slightly more than $150,000, it was explained. Last year, when volume dropped slightly due to a slow down in new store construction, the amount approximated 15% of a 600 to 700-thousand dollar gross volume.

These figures represent an all time high, according to Wesley W. Teaff, whose father, S. E. Teaff, set up the firm 35 years ago.

The reason is simply that the firm has capitalized to the fullest extent on a $70,000 showroom, completed in 1955, which gave the Teaffs an opportunity to put some "well defined" selling ideas to work.

First, the 8,750-sq. ft. building was arranged to include a 40 by 70-ft. showroom, which provides adequate space to display reconditioned fixtures alongside the new equipment, Teaff further commented.

Next, reconditioning facilities, set up in the rear, are claimed to be so complete that S. E. Teaff Refrigeration can turn out a walk-in cooler, a reach-in box, a self-service dairy case, or a meat case, which is not only "guaranteed to operate like new," but actually looks new.

Steam Clean Units

Making this possible is a 15 by 8-ft. tiled room, at the left rear of the warehouse, where all newly-received trade-in fixtures undergo a thorough steam cleaning. With 250 p.s.i. the steam cleaner strips away the grime, hardened grease, oil, and lint down to the initial finish. All operating equipment, all metal surfaces, porcelain, enameled areas, glass, spaces beneath the decking, etc., receive the same care.

The room then "doubles" as a paint spray room equipped with a separate compressor which provides for a factory-like over-all paint job or "touch up," whichever is required, Teaff stated. All surfaces which require painting are sanded down, primed, and "feathered in" to match the original paint job.

With a service staff which includes three servicemen, two cabinet repairmen, two delivery men, and a supervisor, the Houston dealer can assign a specialist to every sort of clean up job, and he believes he can depend upon getting the results most likely to please a prospect.

Guarantee Equipment For a Year

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KRAMER
UNICON FOR
SUPERMARKETS
Serves 14 Compressors
Winter and Summer
WITHOUT ANY WATER*
Photographs of UNICON installation at Trimborn's Supermarket, Hales Corner, Wisconsin
Installed by Real Refrigeration Sales and Service, Milwaukee, Wisconsin
Units furnished by Wisconsin Refrigeration Supply Company, Milwaukee, Wisconsin
WRITE FOR BULLETIN U-291
*UNICON is a Remote-Type Air-Cooled Condenser
KRAMER TRENTON CO. • Trenton 5, N.J.

For more information about products advertised on this page use Information Center, page 26.

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ONCE-IN-A-LIFETIME

FACTORY CLOSEOUT!

Refrigeration distributors — refrigeration buyers — Save over $100.00

Quantities limited • Subject to prior sale

Sale!

Our overcrowded warehouse is your gain! . . . and we've got to move these discontinued models to make room for our newer cabinets.

These are first-line, first-class Savage merchandisers; no seconds, damaged or floor models. Just a few months ago they would have cost $108.00 more than you pay for them now. Ideal for ice cream, frozen foods, frozen pastries and pizza, frozen pet foods, juices, etc.; use 'em in any number of ways. Busy business-boosters, they'll put the *pulse* in impulse sales!

Buy one and you'll be back for more!

Hard-to-beat features at an unbeatable price!

All-steel construction • Stainless steel trim Glass fiber insulation, 4" minimum • Fluorescent lighting • Brilliantly illuminated superstructure, with removable full-color photos • Non-fogging, 4-ply glass front with additional baffle • Full length top opening, convenient reach-in height

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Savage

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Get your copy

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Mail this ad with your name and address to: Air Conditioning & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

Capitalizes on Showroom

Dealer Pushes Used Equipment Sales to 15% of Gross By Applying New Fixture Merchandising Techniques

HOUSTON, Texas — Because the firm applies basically the same principles to the merchandising of used commercial refrigeration equipment as to new fixtures, S. E. Teaff Refrigeration here is turning over from $75,000 to $150,000 additional volume per year, it was reported.

In 1955 when Teaff sales went over the million dollar mark, the Houston Friedrich dealer did 15% of its gross volume in used fixtures, or slightly more than $150,000, it was explained. Last year, when volume dropped slightly due to a slow down in new store construction, the amount approximated 15% of a 600 to 700-thousand dollar gross volume.

These figures represent an all time high, according to Wesley W. Teaff, whose father, S. E. Teaff, set up the firm 35 years ago.

The reason is simply that the firm has capitalized to the fullest extent on a $70,000 showroom, completed in 1955, which gave the Teaffs an opportunity to put some "well defined" selling ideas to work.

First, the 8,750-sq. ft. building was arranged to include a 40 by 70-ft. showroom, which provides adequate space to display reconditioned fixtures alongside the new equipment, Teaff further commented.

Next, reconditioning facilities, set up in the rear, are claimed to be so complete that S. E. Teaff Refrigeration can turn out a walk-in cooler, a reach-in box, a self-service dairy case, or a meat case, which is not only "guaranteed to operate like new," but actually looks new.

Steam Clean Units

Making this possible is a 15 by 8-ft. tiled room, at the left rear of the warehouse, where all newly-received trade-in fixtures undergo a thorough steam cleaning. With 250 p.s.i. the steam cleaner strips away the grime, hardened grease, oil, and lint down to the initial finish. All operating equipment, all metal surfaces, porcelain, enameled areas, glass, spaces beneath the decking, etc., receive the same care.

The room then "doubles" as a paint spray room equipped with a separate compressor which provides for a factory-like over-all paint job or "touch up," whichever is required, Teaff stated. All surfaces which require painting are sanded down, primed, and "feathered in" to match the original paint job.

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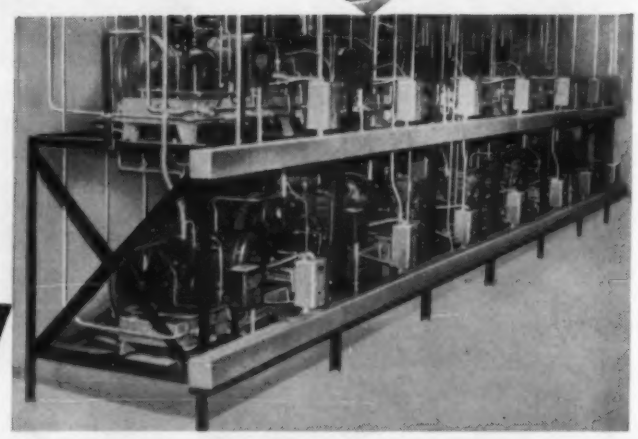

U.L. & A.S.M.E. WATER-COOLED CONDENSERS ¼ TON to 15 TONS and LIQUID RECEIVERS for EVERY REQUIREMENT
Write for our NEW Catalog
STANDARD REFRIGERATION CO.
332 S. Hoyne, Dept. C
Chicago 12, Ill

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Men on the Move . . .

Lord & Palmer, Inc. (Belding, Mich.)—LEW G. BURKHART, formerly with Bryant Heater Div., Carrier Corp., has been named vice president. He will supervise field operations for Mercury Air Conditioning & Heating Div. with offices in Cleveland.

Dunham-Bush, Inc. — Appointment of EDWARD ALBIN, former regional sales manager for Anchor Heating Co., as sales engineer for the St. Louis territory has been announced.

Tecumseh Products Co.—E. R. BOYNTON has been named assistant chief engineer. He previously was with General Electric Co. and Copeland Refrigeration Corp.

Century Engineering Corp. (Cedar Rapids, Iowa) — Appointment of FLOYD H. AARVIG, with many years' experience in the heating and cooling field, as district sales manager of District 16 (parts of Kansas, Missouri, Illinois, and Kentucky) has been announced.

Carrier Corp.—JOHN F. KOOISTRA has moved up from special representative for governmental activities in Washington, D. C. to western regional manager with headquarters in Los Angeles. He replaces WILLIAM YERKES, who resigned to join the Los Angeles manufacturing firm of C. E. Howard Co. as vice president and chief engineer.

WHITNEY H. WETHERELL, formerly a sales engineer in Carrier's New York office, has been named manager of the firm's Machinery & Systems Div. office in Boston.

DAVID F. FORWARD has joined the advertising and sales promotion department of the company as assistant sales promotion manager of the Allied Products Div. He was with a Rochester, N. Y. firm in advertising and promotion.

Whirlpool Corp.—Appointment of JOHN H. PLATTS as general manager of the Evansville, Ind. Div. has been announced. He was formerly manager of laundry sales to Sears, Roebuck & Co.

WILLIAM P. MACKLE, who had a sales management firm in Philadelphia, has been named district manager of RCA Whirlpool air conditioners in the district comprising Portland, Me., Boston and Springfield, Mass., Providence, R. I., Hartford, Conn., Albany, Syracuse, Binghamton, Rochester, and Buffalo, N. Y.

DONALD W. MCALPINE, formerly a sales engineer for Norris-Thermador Corp., was appointed air conditioner district manager for Cleveland, Toledo, Columbus, Cincinnati, and Dayton, Ohio, Detroit, Saginaw, Lansing, and Grand Rapids, Mich.

MARK STITES, who has been midwest regional sales manager for RCA Service Co., Inc., will handle air conditioners as district manager in Kansas City and Wichita, Kan., St. Louis, Denver, Des Moines, Iowa, Sioux Falls, S. D., and Omaha, Neb.

HERBERT C. KLAPP in New York City, T. W. COBBLEDICK in Atlanta, and JOHN M. KELLER in Dallas, have been named regional air conditioning specialists and will report to respective district managers.

Norge Div., Borg-Warner Corp.—Appointment of GEORGE L. BEYERS, previously Servel, Inc. district training manager in the Ohio area, as district manager in Alabama, Georgia, and Tennessee has been announced. R. K. BURBIDGE has been named district manager in southern California and Arizona. He was formerly western regional manager for Sylvania.

Dunkirk Radiator Corp. — Election of M. C. REED as president, succeeding the late L. N. MURRAY has been announced. He has been vice president-sales.

Stewart-Warner Corp., Heating & Air Conditioning Div.—Appointment of RAY F. DEVANEY as assistant sales manager of Stewart-Warner, Stewart-Warner Winkler, and Stewart-Warner Saf-Aire heating and air conditioning products has been announced. He has served as assistant to the sales manager. WALTER R. LEANDER, formerly regional sales manager, has been named sales promotion manager.

Carrier Bock Corp. — J. L. WOODALL is new manager of the firm's Fort Worth wholesale zone. He previously was with Carrier Corp. in Dallas.

Pennsalt Chemicals Corp.—Appointment of JOHN D. B. GOULD to the "Isotron" refrigerant sales staff has been announced. He will serve manufacturers in the middle west with headquarters in Chicago.

Westinghouse Electric Corp.—E. W. SEAY has been appointed manager of general advertising and will be responsible for corporate advertising programs and advertising services departments. He previously was assistant manager of general advertising.

Armstrong Furnace Co. — Appointment of ROBERT G. WATKINS, formerly with another furnace making concern, has been named district manager of Michigan.

Roberts-Gordon Appliance Corp. (Buffalo)—LEONARD C. SMYTH will retire June 30 as executive vice president of this heating and cooling equipment maker. He will continue as director and consultant.

Milton Roy Co. (Philadelphia)—Appointment of JOHN PROCOPI as sales manager of this controlled volume pump and chemical feed system producer has been announced. He has been market development manager. H. RODMAN SMITH, chief application engineer, has been appointed assistant sales manager of the firm. JOHN P. KLEMBETH, formerly production manager for Fieldin Instrument Div., Robertshaw-Fulton Controls Co., has been named assistant chief engineer.

Cory Corp., Contract Div.—S. E. VICKERS, former vice president and director of research for Addison Products Co., has joined this division serving private label air conditioning accounts.

Climatic Air Div., Tyler Service Parts Co. (Tyler, Texas) — J. E. WILEY, JR., Dallas merchandising and marketing consultant, has been named sales manager. The firm has also announced an expansion program which includes relocation of its automotive air conditioner sales branch and warehousing facilities in Dallas. The new building there will be located at 2915 Canton St.

Waukesha Motor Co. (Waukesha, Wis.) — NEWTON H. WILLIS, manager of the Railway Div., has been named a company vice president.

Cherry-Burrell Corp. (Chicago)—HOWARD H. CHERRY, JR. has been elected president of this dairy and food equipment manufacturer. He succeeds JOHN G. CHERRY, who will continue as a director. D. H. BURRELL III resigned as operations vice president but will continue as a director.

TEMKON

Air Conditioning and Refrigeration

TEMPERATURE LIMITED

Burlington Road, London, SW6. Cables: Temtur, London

Largest Producer of Air Conditioning Units outside the U.S.A.

• ACTIVATED CHARCOAL AIR PURIFICATION IS A BUSINESS BUILDER •

SAVINGS & LOAN FINDS FRESH AIR PAYS— WITH INTEREST

- Air in vault (above) was stifling, stale, laden with odors. Patron reaction led to installation of Barnebey-Cheney cannister circulator (top left) which now keeps vault air fresh and odor-free. It also cleaned up new paint smell after vault was redecorated.
- Branch office manager installs fresh Dacor (disposable activated charcoal odor remover) in York package unit. Filter freshens air, also keeps odors from adjacent coffee counter from permeating entire office. As photo shows, Dacor is easy to install.

Odor control is important in any business—especially those which must "meet the public," like Ohio Federal Savings and Loan, of Columbus. By the addition of activated charcoal air purification, their *air coolers* became true *air conditioners.* Gone is the stuffy air, the usual odors of confined work area, the stale atmosphere in the deposit-box vault. "It really makes a difference," says the appreciative office manager. Customer satisfaction is reflected in increased business.

Increased business can be yours also—when you sell activated charcoal air purification. Barnebey-Cheney makes a filter or self contained purifier for most every kind of installation, from small homes up to the largest public buildings. This variety of sizes and types makes Barnebey-Cheney equipment easy to sell—virtually everyone is a prospect for air purification. It's an important clincher for ordinary air conditioning sales, too. Write today for full information.

• *Good business for you, good business for your customers — that's activated charcoal air purification!*

BARNEBEY-CHENEY

CASSADY at EIGHTH COLUMBUS 19, OHIO

Barnebey-Cheney ACRN617
Cassady at Eighth
Columbus 19, Ohio

Please send me the full sales story on activated charcoal air purification

My name .....

Address .....

City ..... State .....

Schnacke

THERMATROL

Capacity Control Eliminates Compressor Capacity Problems.

NO MORE NEED for obsolete cylinder unloading methods which cause unbalanced compressor and hazardous friction heat.

Fits into suction line of any system and controls evaporator pressure within plus or minus one pound. A simple modulating control—which also eliminates cycling, reduces power consumption, and does not create vacuum conditions.

The compressor pumps a certain amount of gas with all cylinders assuring a cool, smooth running compressor. One simple adjustment. Only one control with no delicate parts, eliminates the usual constant service and parts replacement problem.

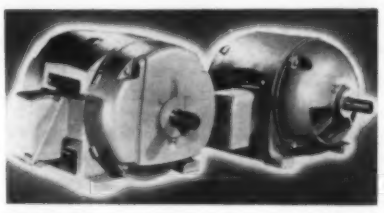
Controls any compressor or system from 100% to 25%. Reduces in a curve — not steps.

Invented by Schnacke and proven by thousands of satisfactory installations for eight years.

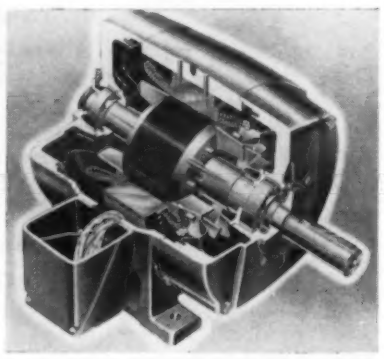
SCHNACKE, INC. EVANSVILLE 7, INDIANA

Manufacturers of Compressors, Condensing Units, Water Chillers and Cooling Towers 5 to 60 tons.

For more information about products advertised on this page use Information Center, page 26.



IMPROVED enclosure of new General Electric Co., dripproof motor is indicated in above photo which shows new and old models in comparable frame sizes. New motor, l., is rated 125 hp. and old, r., at 75 hp.



CUTAWAY view of open dripproof model in new 40 to 125 hp. "Tri-Clad" 55 motor shows long, running seals along the shaft on the outside of the bearing housing to keep grease in, dirt out.

G-E Redesigns 40 to 125 Hp. Induction Motors; Builds To NEMA Frame Ratings

SCHENECTADY, N. Y.—General Electric Co. has announced a new line of a.c. induction motors from 40 to 125 hp.—"the first major redesign for these sizes of motors in almost 20 years."

The company claimed it "becomes the first manufacturer to introduce a new design for its entire standard line of induction motors from 1 to 125 hp."

To be available sometime after July 1, the new motor line is built to new standards suggested by the National Electrical Manufacturers Association which assign a greater horsepower to a given motor frame size. For instance, rating of the 445U frame has been increased from 75 to 125 hp.

FIRST PHASE COVERED 1 TO 30 HP. MOTORS

The final phase of a five-year design and development program was completed last month as the company prepared to begin full production of 40 to 125-hp. motors in the new line.

The first phase of the program, involving motors in 1 to 30 hp., was completed about two years ago. These motors, marketed under the "Tri-Clad" 55 trademark, have been so successful that now 98% of General Electric orders specify the new NEMA ratings, it was stated.

Developed at Schenectady by the company's Small A-C Motor & Generator Dept., the new motor line "is geared to a market which is expected to increase at least 75% by 1965," G-E said.

WEIGHT SAVED, SIZE REDUCED

General Electric said its new Tri-Clad 55 motors in the just-completed higher horsepower range "average 20% lighter than the former models—with actual weight savings varying between 100 and 500 lbs. per motor. Size, for comparable horsepower ratings, has been reduced an average of 27%.

"The weight and space savings were achieved largely as a result of insulation improvements which permit the use of thinner and more effective materials.

"Improvements in manufacturing techniques include the use of tape-controlled machine tools which permit the production of specialized components by means of standard equipment, more extensive use of computers, and the application of other automatic machinery for greater uniformity and closer tolerances."

Included in the range of new models are both open-dripproof motors for most standard applications and totally-enclosed fan-cooled motors for use in corrosive atmospheres.

Air Conditioning School Teaches Indian To Design Units for Use In Tropics

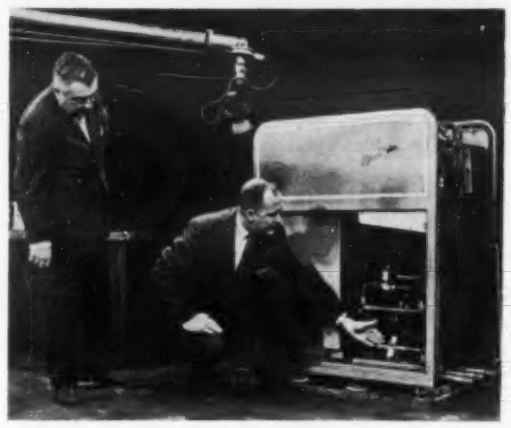
DETROIT—Through a fellowship program under the auspices of the United Nations, Chunilal W. Masand from Jullundur City, Punjala, India completed the commercial air conditioning service course at the training school conducted at the Dearborn plant of the American Blower Div. of American-Standard, it was announced here recently.

The International Branch of the Bureau of Apprenticeship and Training, U. S. Dept. of Labor, arranged for Masand's training in the United States in the field of manufacture and development of refrigeration and air conditioning equipment, it was indicated.

Masand is service director of Masand Motors, Ltd., a firm of engineers engaged in fabricating and marketing refrigeration equipment. He will use his training to assist in the designing of equipment to meet the specific requirements of India's hot, tropical climate, it was explained.

The American Blower application and service courses give practical, comprehensive instruction in basic design as well as thorough laboratory training in operation and servicing problems, it was pointed out. Present classes for these courses are completely booked but a new C.A.C. training program will begin in the fall, the announcement said.

Controls Firm Seen Having 'Exceptional' Growth, Sales



HOST of TV program, "This Is the Midwest" Fahey Flynn with Lou Putze, president of Controls Co. of America are shown pointing to the A-P model 65 water regulating valve of an ice cube maker. On the same installation is shown the 73 Solenoid valve. Dramatic story of the company's growth and what was termed "impressive" sales picture and production of extensive variety of new products was told on the documentary CBS-TV program "This Is the Midwest."

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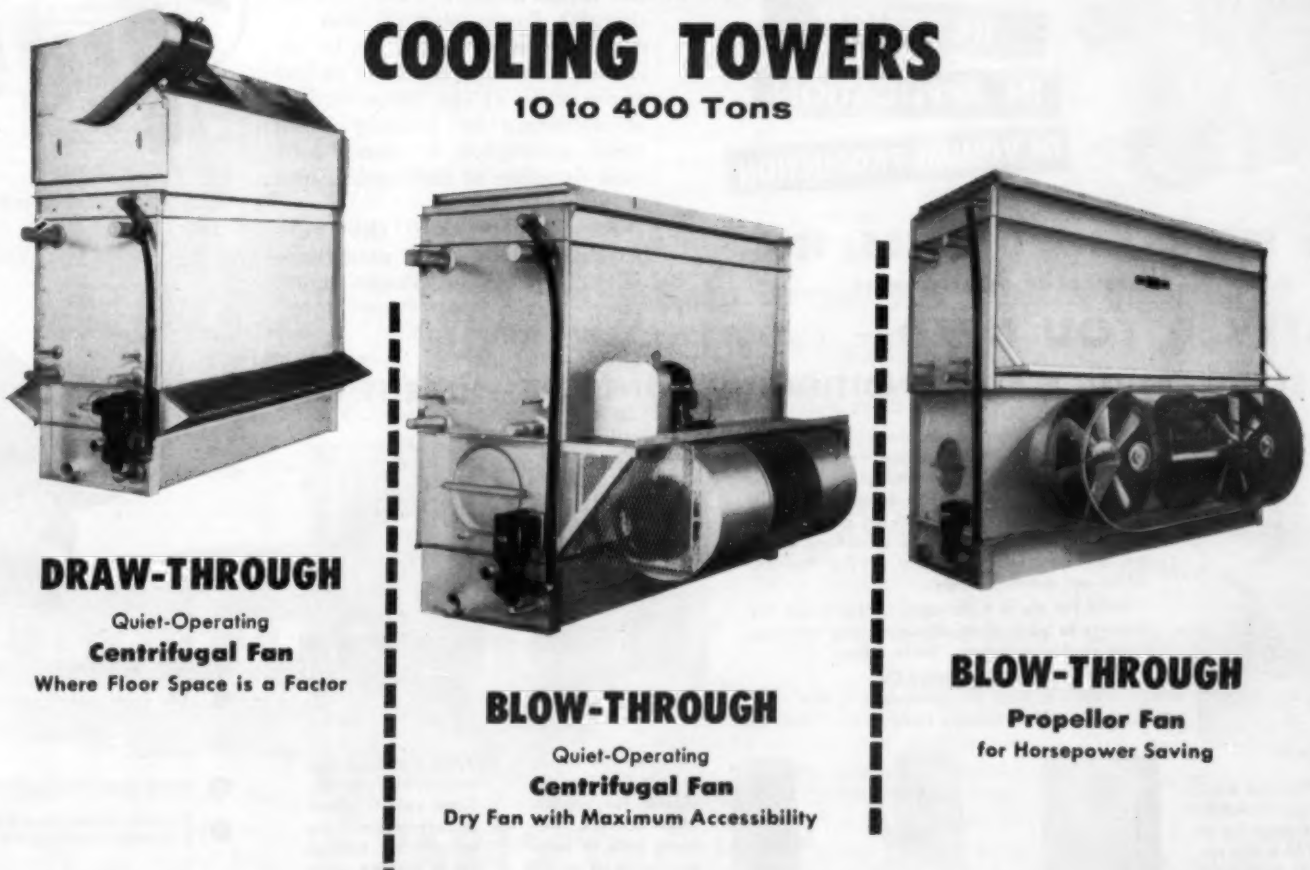

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SOLDERS, FLUXES

Part 3—Types of Fluxes and Uses

By Frank J. Versagi
Mueller Brass Co., Port Huron, Mich.

Next to a discussion of desiccants, a discussion of solder fluxes is the best way to insure a heated exchange of ideas among refrigeration servicemen.

Acid fluxes, non-corrosive fluxes, liquid fluxes, paste fluxes, flux-solder combinations all have their defenders and detractors. In the articles on corrosion we briefly mentioned the effect of some types of solder fluxes on metal tubing.

Functions of Fluxes

Before we attempt to evaluate the fluxes, let's first learn exactly what functions a flux is designed to perform. We will then be in a better position to determine which flux will fit our purpose.

Briefly, a soldering flux is an active chemical which promotes or accelerates the wetting of metals by solder. The flux does this by removing tarnish films, preventing oxide formation during heating, and by being easily displaced by the molten solder.

When a chemist desires to dissolve a metal oxide, such as copper oxide or iron oxide, he usually does it by covering the oxide with an acid and heating it. For some purposes, especially in the cases of oxides not easily dissolved by the usual acids, the chemist resorts to "fusion." That is, he will mix the oxide with a chemical powder and heat the mixture. The fused chemical will dissolve the oxide as effectively as would a strong acid, and the cooled mixture can usually be dissolved in water.

Regardless of the type of flux used in soldering, this fusion type dissolution is the important factor. Normal tarnish on copper, aluminum, iron, and all the common metals is, in great part, the oxide of the metal involved.

Even Shiny Surfaces Have Oxide Layer

The oxide is formed from the reaction of the clean metal with the oxygen in the air. Even metal surfaces which seem shiny and clear almost always are coated with a microscopic layer of oxide.

This microscopic layer of oxide makes it impossible for a solder to reach the actual base metal and form a bond; therefore, it is absolutely necessary that the oxide be removed.

When a flux is applied to such a surface and heated, the active components in the flux dissolve the oxide layer. However, since the base metal is now hot, it will more readily than ever oxidize in air, and it is the next function of the flux to prevent further oxidation and/or to redissolve immediately any oxide which might form during the soldering operation.

Must Be Momentarily Very Active Chemical

We can see that any flux to be effective must be, at least momentarily, a very active chemical. For this reason, as we will see later, the term "non-corrosive" is inaccurately applied to fluxes. Even the most active flux, if heated hot enough or long enough in air will become saturated or full of oxide. In this case, not only does it fail any longer to act as a flux, but it becomes difficult to clean up.

Generally speaking, very active liquid fluxes are short lived; sluggish fluxes, slightly less active, are longer lived. To be effective any flux must be in the liquid state at the temperatures of soldering or brazing. With these principles in mind, let's look at some of the basic types of fluxes.

First there are the very strong, active fluxes, sometimes called acid fluxes. These highly corrosive fluxes consist of inorganic acids and salts. (The difference between an organic and an inorganic chemical is that all the former contain the element carbon.)

TABLE I

Inorganic (Highly Active) Chemicals Used In Fluxes

These chemicals can be used singly or in any mixture.

Zinc Chloride	Hydrofluoric Acid
Ammonium Chloride	Fluoboric Acid
Stannous Chloride (Tin Chloride)	Boron Trifluoride
Hydrochloric (Muriatic) Acid	Sodium Chloride (table salt)
Ortho-phosphoric Acid	

TABLE II

Organic (Less Active) Chemicals Used In Fluxes

Organic chemicals always contain carbon as one of their elements.

Glutamic Acid Hydrochloride	Lactic Acid
Aniline Hydrochloride or Phosphate	Oleic Acid
	Stearic Acid
Hydrazine Hydrobromide	Urea

Organic, Inorganic Fluxes

Tables I and II list the common inorganic and organic chemicals used in making up most commercial fluxes.

The active fluxes can be applied as a solution, as a paste, and even as a dry salt. They can be used with torch, open flame, oven, or induction heating. Because they are inorganic and contain no carbon, they will not char or burn.

Active fluxes are used where conditions require a rapid and positive fluxing action. Fluxes can be compounded which will dissolve the toughest oxides in ferrous and non-ferrous metals.

Heating does not change the chemical make-up of the unused portion of an active flux—that portion which had no oxides to dissolve. Therefore, the remaining flux is chemically as active as the original.

For this reason, corrosive fluxes should never be used in soldering closed containers such as thermostats or bellows, nor in soldering of assembled electrical equipment.

A typical active liquid flux contains 40 oz. of zinc chloride, 4 oz. of ammonium chloride, dissolved in water and diluted to a gallon.

A common paste flux contains 25% zinc chloride, 3.5% ammonium chloride, 65% petroleum jelly, and 6.5% water.

Zinc Chloride Is Active Agent

The zinc chloride is the active agent in these fluxes. However, since zinc chloride melts at 504° F., ammonium chloride is added to reduce the melting point to about 350° F. so that the fluxes

(Concluded on next page)

ACKNOWLEDGEMENT: The following sources supplied much of the background information for these articles on solders and fluxes.

1. "General Engineering and Laboratory Data," Mueller Brass Co.
2. "Corrosive Fluxes—Their Role in Soldering," Robert A. MacIntosh, Tin Research Institute.
3. Technical Bulletins, Handy & Harman.

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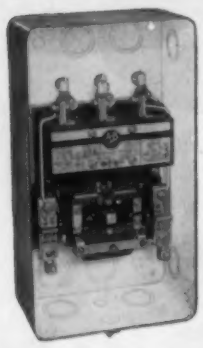

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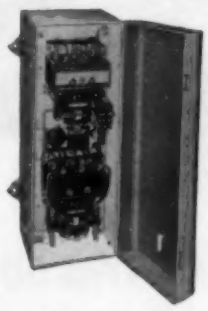

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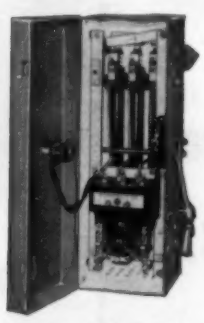

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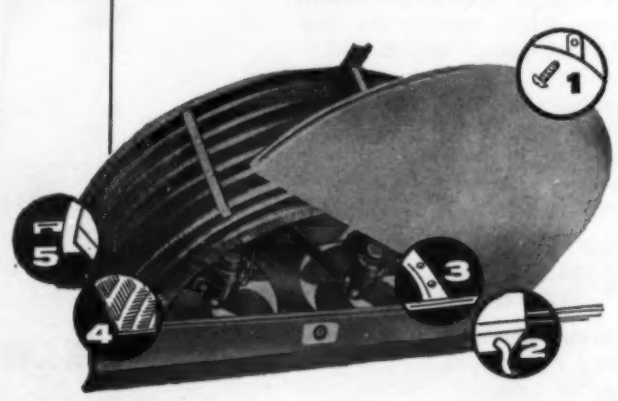

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Solders and Fluxes--

(Concluded from preceding page)

can safely be used with the soft solders. The two fluxes above are general purpose fluxes and can be used on low carbon steel, copper, brass, and bronze.

Actually, the chemicals listed in Tables I and II can be compounded in a multitude of ways depending on the end result desired.

For example, for joining aluminum to aluminum a stannous chloride or tin chloride base flux is used. When the flux melts, the aluminum becomes tinned, and this prevents the reformation of aluminum oxide which is the toughest oxide film encountered by the normal serviceman.

No Non-Corrosive Fluxes

Strictly speaking, there is no such thing as a non-corrosive flux for, as we have explained, the very nature of fluxing requires an active chemical. What is usually implied by the term non-corrosive is that the chemicals in the flux are not the extremely active inorganic chemicals and that the products left after soldering are not as active as the original flux.

In such fluxes, less active chemicals as those listed in Table II are used. These chemicals decompose on heating, but remain active long enough to do most jobs. They do tend to char, burn, or volatalize upon heating, so care must be taken not to overheat the joints before the solder is applied.

A typical organic flux contains lactic acid and water. Another contains glutamic acid hydrochloride, urea, and water.

Remove Residue

Although the residue left when an organic flux is used is not as corrosive as that left when an active inorganic flux is used, the residue is not as easily removed. Whatever type of flux is used, good soldering procedure calls for washing or wiping off the residue.

It is next to impossible not to retain some particles of flux in the finished joint; in most applications this is not serious. However, the problem can be prevented by moving the members of the joint while the alloy is molten.

Either sliding or rotating the faces, or jarring or vibrating the joint will accomplish this purpose. Such action will also tend to remove any gas bubbles which might have been trapped during the use of the more volatile fluxes.

Since some flux is retained in the joint, the flux must be kept clean and free from dirt, filings, lint, and foreign matter which are to be found at most work sites. Keep the flux container covered when not in use; avoid working over an open can of flux.

Choice of Liquid Or Paste Flux

Individual preference determines whether a liquid or paste flux should be used. Liquid fluxes have the obvious advantages of speed and positive action. They have the disadvantages of tending to flow where they are not wanted and of spraying when heating.

The paste fluxes can be smeared where wanted; several joints can be fluxed and assembled before soldering begins with no fear of the flux running out and leaving a dry spot.

The manufacturers of several fluxes have at times claimed that no pre-cleaning is necessary because of the penetrating power and activity of their fluxes. For reasons which we shall discuss later under procedure, this is an unwise shortcut.

Normal tube and fittings, having been stored, carried about, and stored again will invariably contain extraneous dirt and debris which no flux is designed to remove.

Then there are the paste solder-fluxes which have finely powdered solder dispersed in a paste flux. The paste is brushed on exactly as a normal flux. When the joint is heated, the solder is already in place. Solder-flux pastes of this type have been used successfully on very small fittings.

Most servicemen have found, however, that on normal work, it is necessary to feed more wire solder into the joint to fill it. Actually, the manufacturers of these pasted solders usually make such a recommendation in their instructions.

Use Flux To Be Safe

One other point: solders or brazing alloys containing phosphorus have been used without fluxes on very clean work, since the phosphorous itself acts as a deoxidizer. To be safe, use a flux anyway.

If the serviceman will remember the prime functions of a flux and the end use of the joints he is making, he can determine for himself which type of flux he prefers, since all have been used successfully.

The choice of one type or another usually depends on experience and mechanical considerations, rather than the chemical merits of the flux. There have been poor fluxes on the market, but they do not last long.

(To Be Continued)

G. L. Seydel Gains N. O. Nelson Control

ST. LOUIS—Controlling stock interest in the bankrupt N. O. Nelson Co., refrigeration, air conditioning, heating, and plumbing supply house, has passed to G. L. Seydel and associates, it was reported here.

Seydel was in St. Louis to take possession from the St. Louis Trust Co., transfer agent. He is head of a local stock brokerage firm and a resident of Davenport, Iowa.

Sales of 96.89% of the Nelson stock to Seydel and associates was recently approved by a Federal district court. Stock was purchased from the Automatic Washer Co., Newton, Iowa, also in bankruptcy, for $700,000.

George Hoffman, operating head of N. O. Nelson and a vice president before it went into bankruptcy, said it was Seydel's plan "to bring it out of bankruptcy as quickly as possible."

Automatic Washer acquired control of the Nelson company early last year from the Bellanca Corp. of Akron, Ohio. The Nelson firm went into bankruptcy July 23 last year.

Blake Thomas Will Distribute Recold Lines In Midwest

LOS ANGELES—The Blake Thomas Co., a new firm just established in Effingham, Ill., has been appointed a distributor of air conditioning and commercial refrigeration products for Recold Corp., announces H. T. (Hy) Jarvis, president of Recold.

With headquarters and warehouse in Effingham, the Thomas company will be in a position to serve Kansas, Missouri, southern Illinois, and southern Indiana. It is eventually planned to open sales offices of the firm in St. Louis, Kansas City, and Indianapolis, it was reported.

H. Blake Thomas is owner of the new company. Associated with the heat transfer industry since 1926, Thomas was vice president in charge of sales and advertising for McQuay, Inc. until March of this year.

A past president of the Heating & Cooling Coil Manufacturers Association, Thomas was also a director of the Air-Conditioning & Refrigeration Institute.

Baltimore-Washington ASRE Outing June 21

WASHINGTON, D. C. — The Baltimore-Washington Section of the American Society of Refrigerating Engineers will hold its annual men's outing on Friday, June 21, outing chairman A. C. Crawford announced.

The location is Ellicott City, Md., which is about half-way between the two cities.

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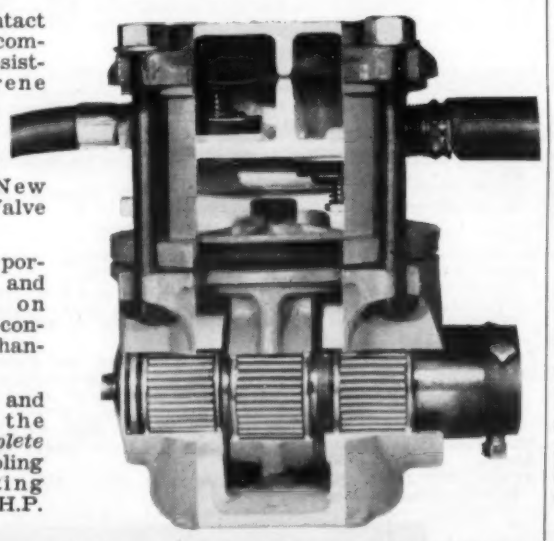

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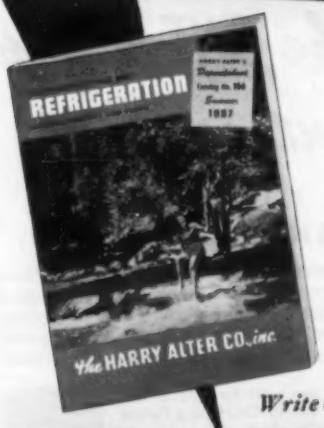

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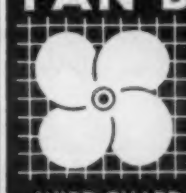

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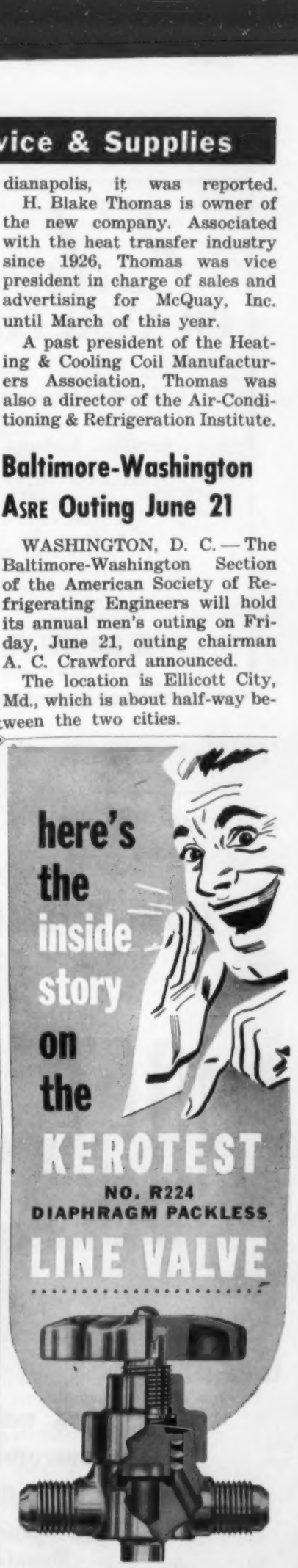

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NOTICE TO SMALL FIRMS

Navy Purchasing Office, 4th & Independence Ave., N.W., Washington, D. C. Attn.: SPF-1A.
The following items are procured under IFB 600-1621-57-S—Bid Opening 19 June 57.
CHILLED WATER COOLING COILS TYPE A, various sizes, 42 DW to 46 DW, Total quantity all sizes combined, 127 ea.—GRAVITY COILS Size 3G, 20 ea.—Size 5G, 10 ea.—CHILLED WATER UNIT COOLER TYPE B with 115 V, a.c. Motor, Sizes 42 UW, 7 ea.—Size 43 UW, 13 ea.—Size 45UW, 2 ea.—Size 41 UW, 5 ea. per Spec. MIL-A-2939B dated 27 Aug. 1953 and Amendment No. 6 dated 14 Nov. 1956 with exceptions as indicated in the invitation. NOTE: The material called for under this specification is of a type on the Navy Qualified Products List.

Base Procurement Office, England Air Force Base, Alexandria, La.
MODIFICATION AND IMPROVEMENT AND INSTALLATION OF HEATING AND AIR CONDITIONING SYSTEMS in Squadron operations buildings Nos. 2131, 2101, and 821 at England Air Force Base, Alexandria, La.—Job—IFB 16-600-57-77B—Bid Opening 17 June 57.

Purchasing Division, Cameron Station, U. S. Army, Alexandria, Va.
REPLACE EXISTING STEAM HEATING LINES from Central Heating Plant to Whse. No. 8 and from Whse. No. 1 to PX Gas Station at Cameron Station, U. S. Army, Alexandria, Va. Work to be completed within 90 calendar days from date of receipt of notice to proceed—Job—IFB QM 44-109-57-80 B—Bid Opening 19 June 57.

ARMY

Purchasing and Contracting Office, Fort Totten 59, N. Y.
MODIFICATION OF AIR CONDITIONING SYSTEM Bldg. 248 and installation of Cooling Tower Bldg. 90 at Fort Totten, N. Y., and miscellaneous incidential work in connection with foregoing—Job—IFB AI-30-319-57-71—Bid Opening 20 June 57.

Corps of Engineers, U. S. Army, Jacksonville District, 575 Riverside Ave., Jacksonville, Fla.
CONSTRUCTION OF COOLING TOWER, MacDill Hospital, MacDill AFB, Tampa, Fla.—Job—IFB ENG-08-123-49 B—Bid Opening 18 June 57.

Raritan Arsenal, Metuchen, N. J.
REPLACEMENT OF THE HEATING SYSTEM in Bay B, Building W-5 at Raritan Arsenal, Metuchen, N. J.—Job—IFB 57-515—Bid Opening 18 June 57.

Purchasing and Contracting Office, Fort Jay, Governors Island 4, N. Y.
INSTALLATION OF AIR CONDITIONING in 13th floor, 90 Church St., New York City—Job—IFB A-1-30-094-57-229—Bid Opening 21 June 57.

Army Map Service, Washington, D. C.
INSTALLATION AND MODIFICATION OF AIR CONDITIONING SYSTEMS in Rooms 303, 305, and 307 Erskine Hall Bldg., Army May Service, Spec. and dwgs. are available, Bid sets available thru 14 June 57—Bidders rqrd. to insp. site of installation—Job—IFB 49-018-57-104—Bid Opening 17 June 57.

Purchasing & Contracting Office, Bldg. 29, Ft. McPherson, Ga.
REFRIGERANTS for Third Army Installations, period 1 July 57 thru 30 June 58—TC—IFB DA-09-200-57-57—Bid Opening 17 June 57.

Central Purchasing and Contracting Office, Fort Polk, La.
INSTALLATION OF AIR CONDITIONING SYSTEMS, Fort Polk, La. in 25 Hospital-Use Bldgs.—Job—IFB-AIV-16-027-163B—Bid Opening 27 June 57.

Purchasing and Contracting Branch, Fort Campbell, Ky.
INSTALLATION OF AIR CONDITIONING complete, Bldg. No. S-39, Fort Campbell, Ky.—Job—IFB DA-15-056-57-247 B—Bid Opening 22 June 57.

Purchasing and Contracting Office, Fort Benning, Ga.
AIR CONDITIONING PARACHUTE REPAIR BLDG. No. 2594, Fort Benning, Ga.—Job—IFB 57-244B—Bid Opening 18 June 57.

NAVY

District Public Works Office, Fifth Naval District, U. S. Naval Base, Norfolk, Va.
CONSTRUCT COLD STORAGE BLDG. at Naval Air Facility, Elizabeth City, N. C.—Job—IFB NOY 91332—Bid Opening 20 June 57.

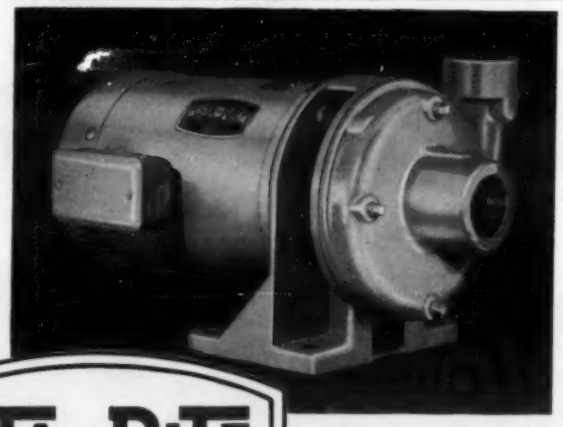
Navy Purchasing Office, 4th and Independence Ave., S. W., Washington, D. C. Attn.: SPF-1A.
The following items are procured under IFB 600-2056-57—Bid Opening 21 June 57.
REFRIGERATOR, ELECTRIC, 9.5 cu. ft. Type I, 100 ea.—RANGE, ELECTRIC, Type 8, 100 ea.

AIR FORCE

Air Force Contracting Office, 3800th Air Base Wing, Maxwell Air Force Base, Ala.
COMPLETE MAINTENANCE OF 4 CARRIER AIR CONDITIONING CENTRIFUGAL MACHINES Model 17M54-8-A and 4 Murray steam turbines Model UV connected thereto for a period of one year commencing 1 July 1957 and extending through 30 June 58—Job—IFB 01-600-57-163B—Bid Opening 26 June 57.

Procurement and Contracting Office, Bolling Air Force Base 25, D. C.
INSTALLING WALK-IN AND DISPLAY REFRIGERATOR AND MEAT AND PRODUCE WRAPPING MACHINE, in strict accord with the specs. and subject to the terms and conditions of the contract (Dwg. No. C-36-07-09)—Job—IFB 49-604-57-107—Bid Opening 25 June 57.

Air Force Contracting Office, 3800th Air Base Wing, Maxwell Air Force Base, Ala.
AIR CONDITION BLDG. 851, Maxwell AFB, Ala.—Job—IFB 01-600-57-166—Bid Opening 20 June 57.



STA-RITE *the ONE pump designed to cut costs of*

AIR CONDITIONING INSTALLATION AND MAINTENANCE

You and your customers get more for your money with Sta-Rite. First cost is usually lower than comparable pumps. More—check cost per gallon delivered. Cost of installation. Cost of maintenance. Yes, and check cost against the expected life of the pump. Sta-Rite pumps give you clear-cut superiority. You see it the way we make bronze impellers, the full-power, ball-bearing, capacitor-type motors, the leak-proof mechanical seal, the one-piece corrosion-resistent shaft.

Ask your wholesaler. Also write for copy of new bulletin describing Sta-Rite Air Conditioning Pumps.

STA-RITE STA-RITE PRODUCTS, INC.
701 S. Eighth Street, Delavan, Wisconsin
Los Angeles, Calif. • Chamblee, Ga.
In Canada: STA-RITE Pumps (Canada) Ltd., Ajax, Ont.

For more information about products advertised on this page use Information Center, page 26.

American Blower Opens Miami Sales Branch

DETROIT—Establishment of new branch sales engineering offices in Miami, Fla. and Mobile, Ala. has been announced by E. W. Petersen, vice president-marketing for American Blower Div., American-Standard.

W. G. Harward was appointed branch manager in Miami. The office there is located at 220 Miracle Mile. Named manager of the Mobile branch office at 461 Government St. was Leo S. Payne.

Both Harward and Payne are industrial engineering graduates of Georgia Institute of Technology. For the past year, Harward has been an American Blower sales engineer in Jacksonville, Fla. and Paine has been working in a similar capacity in the Birmingham territory, the announcement indicated.

Gibson Offers Dealers Guaranteed Plan To Aid Inventory Financing

GREENVILLE, Mich. — An unconditionally-guaranteed plan for dealers to finance Gibson appliances and heating and cooling products was announced by Dean B. Loftus, controller, Gibson Refrigerator Co., a division of Hupp Corp.

The program became effective May 10. A sales finance department has been established by Gibson, with Mark E. Davis as manager.

The Gibson-Hupp Finance Program, designed to facilitate inventory financing through leading agencies nationally, will supplement the existing Gibson-Commercial Credit Plan and the Gibson-Commercial Finance Plan.

Describing the new plan to distributors, Davis pointed out that "it gives you additional financing assistance and allows you to set up a definite line of credit for your dealers for the purchase of Gibson merchandise. In this plan we guarantee the lending agencies against loss on their inventory financing for dealers."

The new plan, designed primarily for the smaller dealer with credit and sales qualifications, "needs a larger amount of credit than a distributor can normally allow him on open account," it was pointed out. "It will remove from distributors the financial burden of carrying excessive dealer receivables on their books.

"Gibson assumes the entire liability to the lending agency in the event a dealer sells out-of-trust, misappropriates, or if the units are destroyed by any type of physical damage excepting flood."

Gibson officials predict the new selling tool will prove a substantial aid to distributors in increasing Gibson sales to dealers. They expect the "Lack of red tape involved in utilizing the plan will be welcomed by distributors and dealers alike."

Paul Reed Dies--

(Concluded from Page 1, Col. 4)

pacity as educational director of the RSES, and through his writings in the NEWS.

He was responsible for many innovations in service training through the RSES—the study course with its certificates for those who completed it, development of an all-makes service manual, and many improvements in educational meetings. He probably was known to more individuals than any other single person in the industry in part through his "Refrigeration Problems" column in the NEWS, which served to keep the industry aware of current good practices in refrigeration work.

Although he was educated at Valparaiso university, Indiana university, and Harvard, Paul Reed never lost his "touch" for the practical type of knowledge that led to better installation and service practices. He started, as he liked to say, as a "tool carrier" with a Kelvinator dealer in Lousiville, Ky., in 1919, and after working with other dealers and a utility company, he joined Servel, Inc., in 1926, in the engineering and service department, becoming service manager in 1935, a position which he held until 1944.

In 1944 he became manager of the refrigeration and air conditioning division of Perfex Corp., which he left in 1947 for his work with RSES.

His wife, Margaret, and a daughter, survive him. Funeral services were held Saturday, June 15, in Milwaukee, with internment at his birthplace, Boonville, Ind.

To Condition Bldg.

CHARLESTON, W. Va.—Air conditioning equipment will be installed as part of a $100,000 remodeling job on the Loewenstein & Sons building at 810 Quarrier St.

ASHAE To Meet June 24-26--

(Concluded from Page 1, Col. 2)

Fourteen papers and two symposiums will be presented during the six sessions scheduled for the meeting. An attendance of some 500 from the U. S. and Canada is expected for the event, which will be called to order by Society President P. B. Gordon at 2 p.m. on Monday, June 24.

A symposium on air conditioning instrumentation will be held Monday afternoon with ASHAE Treasurer C. H. Pesterfield, E. Lansing, Mich., as chairman and R. N. Pond, Rochester, N. Y., as moderator.

On Tuesday morning there will be a topical session on sound and vibration, with H. A. Lockhart, Morton Grove, Ill., as chairman. This will be followed Wednesday morning by a symposium on sound and vibration, with John Everetts, Jr., Philadelphia, as chairman, and J. B. Graham, Buffalo, as moderator.

Meetings of 14 committees, including the Council of the Society, will be held June 22-24.

The meeting program follows (all sessions will be on Eastern Daylight Savings Time):

MONDAY, JUNE 24

9:30 a.m.—Registration.

2 p.m.—First Session. Call to Order—Pres. P. B. Gordon.

"Thermal Circuit Analysis for Developing Application Engineering Information"—S. F. Gilman and O. W. Clausen.

"Thermal Performance of Frame Walls, Part III—Wall Surface Temperatures"—G. O. Handegord.

"Saturation Pressure of Water on the New Kelvin Temperature Scale"—J. A. Goff (by title only).

2 p.m.—Second Session. Call to Order—1st Vice President E. R. Queer.

Symposium on Air Conditioning Instrumentation—C. H. Pesterfield, symposium chairman; R. N. Pond, moderator.

"Fundamentals of Control" — V. Robert Baird.

"Control of High Velocity Single Duct Systems"—W. G. Young.

"Control of High Velocity Double Duct Systems"—H. W. Alyea.

"Coordination of High Velocity Design"—L. F. Flagg.

7 p.m.—Buffet supper.

8:30 p.m.—Habitant evening.

9 p.m.—Dancing.

TUESDAY, JUNE 25

9. a.m.—Registration.

9:30 a.m.—Third Session. Call to Order—2nd Vice Pres. A. J. Hess.

Topical Session on Sound and Vibration—H. A. Lockhart, chairman.

"Criteria for Room Noise from Air Conditioning"—C. M. Ashley.

"An Evaluation of Four Methods for Determining the Sound-Power Output of a Fan"—W. F. Kerka.

"Acoustic Power Level Determination for Machinery in Hard Rooms"—W. J. Burch.

"Studies in Silencing a Diesel Driven Heat Pump"—H. H. Vickers and R. W. Sage.

9:30 a.m.—Fourth Session. Call to Order—Treas. C. H. Pesterfield.

"Acoustic Coupling of Residential Furnaces with their Surroundings"—C. F. Speich, W. R. Dennis, and A. A. Putnam.

"Performance of Intermittently-Fired Oil Furnaces"—W. G. Colborne.

"Measurement of Infiltration in Two Residences, Part I and II"—D. R. Bahnfleth, T. D. Moseley, and W. S. Harris.

"Design and Performance of a Portable Infiltration Meter"—C. W. Coblentz and P. R. Achenbach.

1:30 p.m.—Golf Tournament.

2 p.m.—Sightseeing tour.

7. p.m.—Banquet.

WEDNESDAY, June 26

9:30 a.m.—Fifth Session. Call to Order—1st Vice Pres. E. R. Queer.

Symposium on Sound and Vibration—John Everetts, Jr., symposium chairman; J. B. Graham, moderator.

"Noise Control Problems and Air Conditioning Equipment"—R. J. Wells.

"Techniques of Sound Power Level of Unitary Equipment—R. N. Hamme.

"Sound Standards for Testing and Rating"—H. C. Hardy.

"Application of Standards to Equipment"—R. E. Parker.

"A Method for Estimating Octave Band Level of Noise Generated by Air Conditioning Systems"—F. B. Holgate and Sidney Baken.

9:30 a.m.—Sixth Session. Call to Order—Pres. P. B. Gordon.

"Performance Testing of Roof Ventilators"—J. J. Wannenburg.

"Jet Velocities from Radial Flow Outlets"—Alfred Koestel.

"Velocities and Temperatures on Axis of Downward Heated Jet from 4-Inch Long-Radius ASME Nozzle"—Rudiger Knaak.

Report of Resolutions Committee.

Unfinished business.

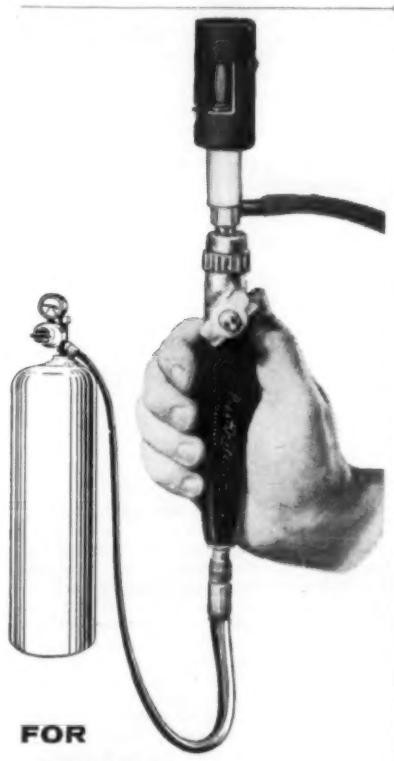
New business.

Adjournment.

Frigidaire Training Center Section Opened In Clarence

BUFFALO — The newly-constructed 6,600-sq.ft. Frigidaire section of the General Motors Training Center in Clarence was dedicated at an open house in the center.

Participants included top Frigidaire executives from Dayton and personnel from the Frigidaire Sales Corp.'s Buffalo branch, headed by J. Forrest Cain. The section will be used for demonstrations and service training on Frigidaire appliances, commercial refrigeration, and similar products for Frigidaire dealers and their service personnel.



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FAST, ECONOMICAL LEAK DETECTION

Prest-O-Lite
Trade-Mark
HALIDE LEAK DETECTOR

Complete Outfits from.... $12.50 (List)

Detect as little as 100 parts of non-combustible halide refrigerant gas in one million parts of air with a compact outfit like this.

Carry it anywhere in one hand without strain or fatigue. Quickly locate leaks too small to be detected with soapy water. Stainless steel detector stem and ceramic insulating sleeve restrict heat of the flame to stem tip, allowing you to work in perfect comfort.

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The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

HEAT INTERCHANGER
Cast aluminum. Inner-Fin construction. No internal joints. Suction line and liquid line are separate tubes. ¼ to 10 Tons.

'CIC' CONDENSER
Cleanable tubes. Inner-Fins in refrigerant tubes for minimum size and maximum heat transfer. ⅓ to 15 H.P. Also available for marine service.

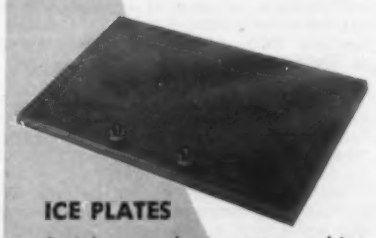
heat-x

HEAT-X PRODUCTS PROTECT YOUR REPUTATION AS A "QUALITY" CONTRACTOR

Any refrigeration job is only as good as its components. Reliable HEAT-X products, designed and manufactured by *heat transfer specialists,* insure the quality of your installations. They save you money, too, by cutting down on costly trouble-calls.

LIQUID COOLERS
Separate refrigerant and water circuits cast within solid aluminum block. No freeze-up damage.

'CR' CONDENSER-RECEIVERS
Cooling coils of copper tubing. Shell of steel pipe. ⅓ to 5 H.P.

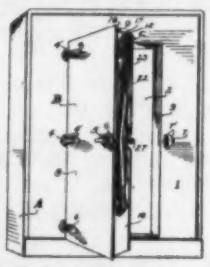


ICE PLATES
Stainless steel or copper tubing embedded in flat aluminum plate. Capacities to 40 GPH cooling from 80° to 40°.

HEAT-X, Inc.
BREWSTER, NEW YORK

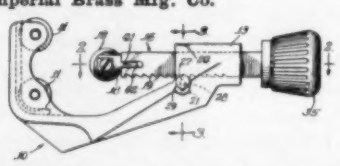
PATENTS *Weeks of April 2 & 9*

2,787,030. REFRIGERATOR DOOR AND ADJUSTABLE PRESSURE EQUALIZING DEVICE. David Franklin Williams, Greenville, S. C.



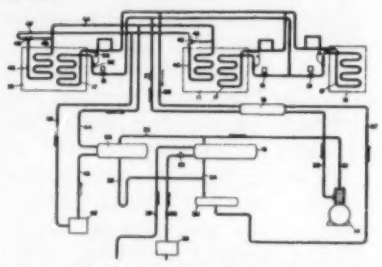
1. A walk-in refrigerator room construction comprising a wall structure defining a walk-in door opening and a flexible door structure mounted on the wall structure adjacent to the opening for closing the said opening, the door structure comprising a front door panel adapted to overlie the exterior surface of the refrigerator wall bounding the door opening, a flexible off-set chamber structure including a flexible top end member, a flexible bottom end member, and a rear panel mounted on the rear of the top and bottom end members and defining a closure for the flexible off-set chamber structure. . . .

2,787,054. READILY ADJUSTABLE TUBE CUTTING MEANS. George E. Franck, Riverside, Ill., assignor to The Imperial Brass Mfg. Co.



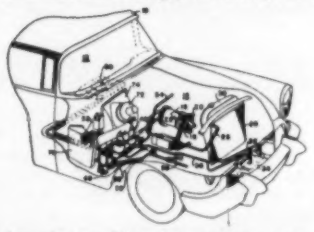
1. A tube cutter comprising a frame member, rollers journalled in the frame member for contacting one side of the tube to be cut, a support member having a bore completely therethrough and mounted in the frame member for longitudinal movement toward and away from the rollers and having means to prevent rotation of the support member relative to the frame member, means for adjustably securing the support member to the frame in any one of a plurality of positions, an actuating rod slidably carried in the support member bore and having a length substantially equal to the length of the support member, a cutter wheel rotatably carried on one end of the rod to contact the other side of the tube.

2,787,128. METHOD AND APPARATUS FOR HEATING AND COOLING A COMPARTMENTED ENCLOSURE. Seymour W. Brown, New York, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



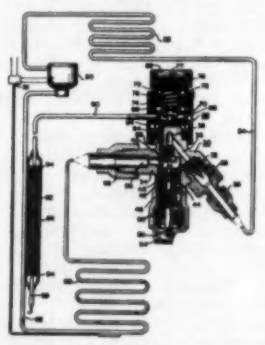
In a heating and cooling system for an enclosure containing a plurality of compartments, the combination of a refrigeration system including a compressor, a condenser, and an evaporator to serve as a cooling source for one of the compartments of the enclosure, a heater, means for circulating fluid through the heater to at least one of the compartments to serve as a heating source, a line connecting the compressor and the condenser, a second line leading to the heater and being connected to the first line, a third line connecting the heater and the condenser to the evaporator, means for supplying cooling medium to the condenser. . . .

2,787,129. AUTOMOBILE REFRIGERATING APPARATUS. Ronald K. Evans, Birmingham, Mich., assignor to General Motors Corp., Detroit, Mich.



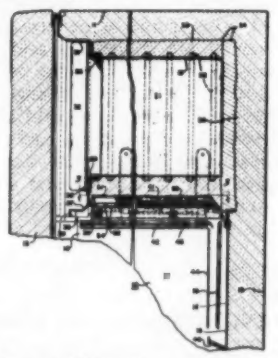
1. An air conditioning system for an automobile having a passenger compartment and an engine in an engine compartment comprising in combination, heat exchange means arranged in thermal exchange relation with air to be conditioned for said passenger compartment, a refrigeration system disposed wholly within said engine compartment and including an evaporator, a compressor and a condenser, power transmitting means including a clutch between said engine and said compressor. . . .

2,787,130. REFRIGERANT EXPANSION VALVE. Daniel L. Kaufman, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.



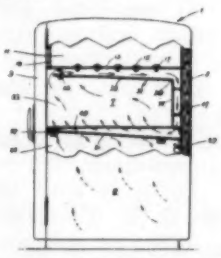
A thermostatic expansion control for controlling refrigerant flow into an evaporator and for limiting the refrigerant pressure in the evaporator including a valve body having an inlet receiving refrigerant and an outlet connected to an evaporator, a valve in said valve body for controlling the flow of refrigerant from said inlet to said outlet, a first metal bellows having its open end sealed to said valve body, a second metal bellows having its closed end adjacent to the closed end of the first bellows, a metal sleeve surrounding said bellows and having one portion connected to and sealed to the valve body and having a second portion connected to and sealed to the closed end of the second bellows. . . .

2,787,131. WATER COOLING REFRIGERATOR. Clifford H. Wurtz, Dayton, Ohio, assignor to General Motors Corp.



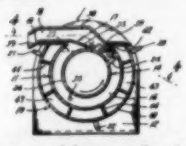
4. In a refrigerator, a cabinet having outer walls, an open top liner in said cabinet forming the bottom, upright back and side walls of a food storage compartment having a front access opening, insulation between said liner and said cabinet outer walls, a door on said cabinet normally closing said compartment access opening, a closed water receiving receptacle at the top of said compartment and directly exposed to the interior thereof, said receptacle being supported from the upper edges of said liner and closing the open top thereof to form the ceiling of said compartment, a substantially flat vertically disposed evaporator of a refrigerating system spaced from and extending along said compartment back wall for cooling and causing circulation of air in the compartment. . . .

2,787,132. MULTI-TEMPERATURE REFRIGERATOR. James G. Scott, Washington, D. C.



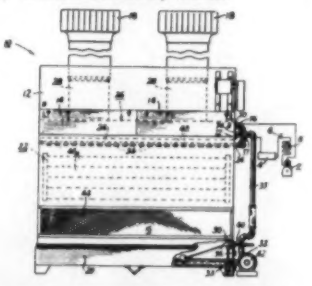
1. A multi-temperature refrigerator comprising a plurality of walls defining a chamber, refrigerating means defining a relative low temperature compartment adjacent the top of said chamber, a heat exchange wall defining a relatively high temperature compartment adjacent the bottom of said chamber and a middle-temperature compartment between said high and low-temperature compartments, and baffle means within said middle-temperature compartment including a plate spaced below said refrigerating means and inclined from the horizontal and spaced from said first and second opposite side walls of said compartment at the lower and upper edges of said plate, respectively. . . .

2,787,133. ICE MAKING AND EJECTING MACHINE. Clarence M. Moe, Fort Worth, Texas.



1. An ice making and ejecting machine, comprising, a substantially horizontally extending cylindrical drum closed at opposite ends, means for introducing water into the drum, means disposed about and adjacent to a portion of the outer periphery of the drum through which a refrigerant gas may be circulated to form ice from the water on the inner periphery of the drum, a substantially longitudinally extending blade within the drum and mounted for rotation about an axis parallel to the longitudinal axis of the drum, said blade having an outer edge for collecting ice from the inner drum periphery upon rotation of the blade, means for rotating the blade. . . .

2,787,134. CONDENSER FOR REFRIGERATION SYSTEM. Cecil Boling, West Hartford, Conn., assignor, by mesne assignments, to Dunham-Bush, Inc., West Hartford, Conn.



10. A condenser unit for a refrigeration system comprising, an air and water cooled condenser including means forming separate air and water paths of flow over different surfaces in heat exchange relationship with refrigerant, means for flowing water along said water path of flow, means for flowing air along said air path of flow, an evaporative cooling chamber in which water from said water path of flow is brought into contact with the air flowing to said air path of flow thereby to produce a cooling effect by evaporation of a portion of the water, and means for recirculating water from said chamber through said water path to flow and said chamber. . . .

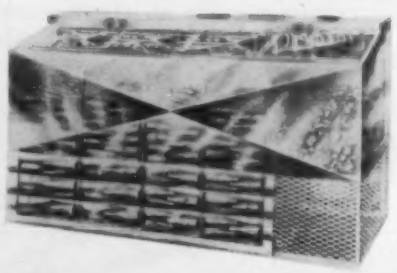
(Continued on next page)

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Copies should be ordered by number and title and a mention of the fact if they are either Designs or Reissues.

Address orders for any of the above to: Commissioner of Patents, Washington 25, D. C.

"A CASE OF COOL JUDGMENT"



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POSITIONS WANTED

AVAILABLE — TOP flight troubleshooter, commercial and industrial refrigeration and air conditioning. 26 years' experience No. & So. Am. rated professional and practical engineer. Sales and management experience. Free to travel. BOX A5811, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

AIR CONDITIONING sales and service engineer—Stable year round employment—residence in and servicing North Central Florida—offering best of employee benefits and security. Successful applicant must be well qualified to service and maintain heat pump equipment, have some experience in sales and layout, and be of good character and reputation. Beginning monthly salary $400-$440, with transportation and expenses provided. In replying state age and give brief resume of experience and training. FLORIDA POWER CORPORATION — P.O. Box 4042, St. Petersburg, Florida.

MAJOR MANUFACTURER of commercial refrigeration is planning a revised setup of district representatives. Opening in Chicago territory will offer a rewarding opportunity for an aggressive man capable of supervising dealers and selling direct to chains and cooperative groups. Salary expenses and commission for right man. All replies treated confidentially. Send brief resume to BOX A5803, Air Conditioning & Refrigeration News.

PRICE CLERK—Excellent opportunity new business for man with heavy experience as wholesale price clerk or contractor estimator in refrigeration and air conditioning. Must be familiar with lists and discounts of all brands. Location Los Angeles. Age to 60. Reply with detailed resume. Replies confidential. BOX A5812, Air Conditioning & Refrigeration News.

NATIONAL MANUFACTURER of commercial refrigeration products located in Southeast needs refrigeration engineer to assist chief engineer. Supermarket fixture experience helpful. Submit resume of qualifications and expected starting salary to BOX A5814, Air Conditioning & Refrigeration News. All replies held confidential.

EQUIPMENT FOR SALE

NEW SILICA-GEL driers: Complete with flare nuts. 8 cu. in. ¼" flare $1.25; 14 cu. ft. ¼" flare $1.75; 20 cu. in. ¼" flare $1.85; 20 cu. in. ⅜" flare $1.95; 32 cu. in. ⅜" flare $2.50; 8 cu. in. no fittings $.65. Orders of $100.00 or more we pay freight. S. GOODMAN, c/o MRE, P. O. Box 122, North Hollywood, California.

NATIONALLY-FAMOUS brand-new condensing units at sensationally low prices. ⅛ h.p. only $34.50. Other sizes up to ¾ h.p. at equally great savings. Also tremendous values in motor compressor domes. ⅛ hp only $31.00. Complete selection of sizes up to 1½ h.p. All units fully guaranteed. Write for complete description and price list. MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 3, N. Y. GRamercy 3-8000.

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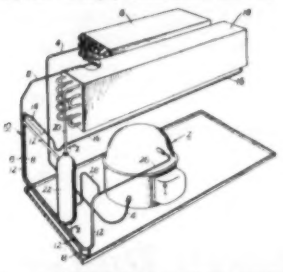
For more information about products advertised on this page use Information Center, page 26.

PATENTS

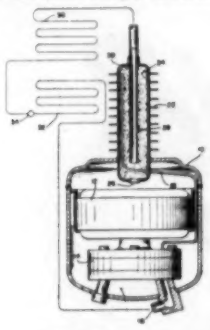
(Continued from preceding page)

2,787,135. AIR CONDITIONER. Lewis R. Smith, Auburn, N. Y., assignor to Remington Corp., Auburn, N. Y.



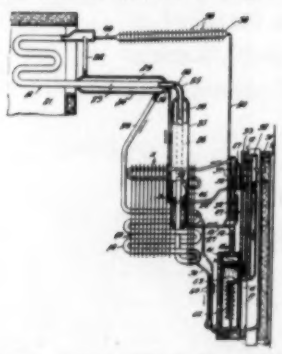
1. In a refrigeration system, the combination of, a compressor, a condenser, a restrictor, an evaporator, a heat exchanger having separate paths of flow, and circuit lines interconnecting the above elements whereby the refrigerant is compressed in the compressor and flows to the condenser where it is condensed and then passes through one path of said heat exchanger and thence through said restrictor to the evaporator and in heat exchange with gas passing from the evaporator through the other path of said heat exchanger to the compressor. . . .

2,787,136. OIL SEPARATOR IN REFRIGERATING APPARATUS. Clifford H. Wurtz, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.



1. In combination, a compressor, a condenser, an evaporator, refrigerant flow connections between said compressor, condenser and evaporator, a housing for said compressor having an inlet opening in one wall thereof through which returning refrigerant vapor flows on its way from said evaporator to said compressor and having an outlet opening through which compressed refrigerant flows on its way from said compressor to said condenser, an oil separator housing having a portion projecting through said last named opening and comprising a pair of concentric tubular elements in which the innermost tubular element is open at both ends with the lower end communicating with the interior of the compressor housing. . . .

2,787,137. ABSORPTION REFRIGERATION. Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden. Original application July 14, 1949, Serial No. 104,771, now Patent No. 2,655,010, dated Oct. 13, 1953. Divided and this application Dec. 23, 1952, Serial No. 327,622. Claims priority, application Sweden July 22, 1948. 6 Claims. (Cl. 62—119.5.)



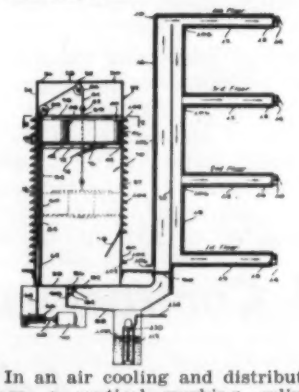
1. In an absorption refrigeration system, a circuit for circulation of absorption liquid comprising an absorber, generator and liquid heat exchanger therebetween having passages for flowing in thermal exchange relation absorption liquid rich and weak, respectively, in refrigerant, a cluster of vertically extending conduits grouped together in the immediate vicinity of one another, common insulating means for thermally insulating said conduits from the surroundings, one of said conduits forming an upright heating tube, said generator comprising several of said vertically extending conduits which are connected in said circuit and at least two of which contain absorption liquid arranged to receive heat from said heating tube. . . .

2,787,138. FLUID MIXING DEVICE. John R. Boyle, Chicago, Ill., assignor to Betz Corp., Hammond, Ind.

2. A fluid mixing and distributing device for conducting fluid having portions in liquid and gaseous states including in combination, an integral tubular member having formed therein a Venturi section and an orifice section, said Venturi section having an inlet of a predetermined diameter, a restricted portion, and a gradually flared outlet portion having a maxi-

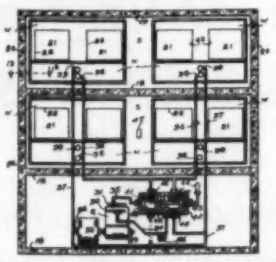
mum diameter substantially the same as said predetermined diameter of said inlet, said orifice section having an inlet for receiving fluid from said Venturi section, said Venturi section and said orifice section mixing the liquid and gaseous portions of said fluid, and a distributing head coupled to said tubular member at the outlet of said orifice section and having a plurality of apertures for connection to a plurality of circuits for distributing the mixed fluid thereto.

2,787,139. AIR COOLING AND CIRCULATING SYSTEM. Felix R. Salazar, San Antonio, Texas.



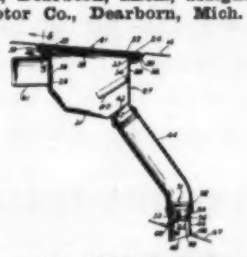
1. In an air cooling and distributing system, a vertical working cylinder having a top wall, a bottom wall, and a side wall, a piston working in said cylinder, means for working said piston vertically in said cylinder, valved air inlet means on the cylinder side wall, valved air outlet means on the cylinder bottom wall, means for evacuating air in the cylinder above the piston as the piston rises, a vertical manifold having a closed upper end and a lower end, a partition in said manifold dividing said manifold into an inner conduit, means closing the lower end of the outer conduit. . . .

2,787,140. HEAT PUMP SYSTEM AND CONSTRUCTION. Adolphe C. Peterson, Minneapolis, Minn.



1. In a means of the character described, a unit adapted for incorporation as a section of a building enclosure and comprising; a pair of parallel fixed fluid conveying elements, each of said elements comprised of a pair of parallel panels spaced apart to provide conduit space intermediately of the pair of panels, the said elements being spaced apart to provide heat insulation between said pair of elements, and combining means attaching the said pair of elements each to the other and oppositely of each other. . . .

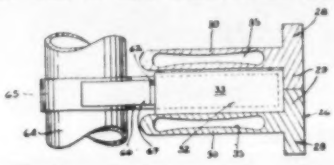
2,787,206. VEHICLE AIR CONDITIONING INTAKE DUCT. Darius D. Dustman, Dearborn, Mich., assignor to Ford Motor Co., Dearborn, Mich.



1. In a motor vehicle body having a rear fender, a generall horizontal rear deck panel having a luggage compartment opening therein, and a floor panel beneath said deck panel, said deck panel having an air intake opening therein intermediate the crown of said fender and the adjacent edge of said luggage compartment opening, a louvered grille mounted upon said deck panel covering said intake opening, a sheet metal sump beneath said intake opening secured to said deck panel, an air duct extending forwardly from the front wall of said sump, a drain duct extending downwardly from the rearward portion of the bottom wall of said sump, a cylindrical valve body extending through an opening in said floor panel. . . .

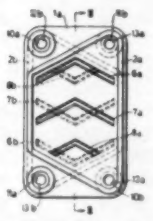
2,787,445. HEAT EXCHANGE SHELF. Theodore A. Dungan, Los Altos, Calif., assignor to Food Machinery & Chemical Corp., San Jose, Calif., a corporation of Delaware. Original application Feb. 24, 1948, Serial No. 10,236, now Patent No. 2,629,233, dated Feb. 24, 1953.

1. A component of the wall of a refrigerating chamber, comprising an elongated bar adapted to be secured in the wall of said chamber, an article



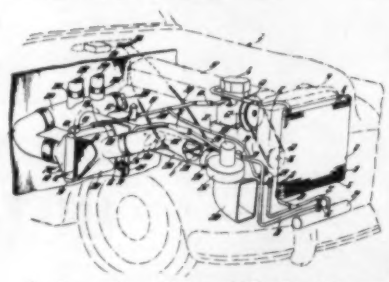
supporting shelf secured to and projecting outwardly in cantilever fashion from and medially of said bar along substantially the entire length thereof, and a closed channel for fluid refrigerant disposed within and extending longitudinally of said shelf.

2,787,446. PLATE TYPE HEAT EXCHANGER. Ake Birger Ljungstrom, Stockholm, Sweden, assignor to Aktiebolaget Rosenblads Patenter, Stockholm, Sweden, a joint-stock company of Sweden.



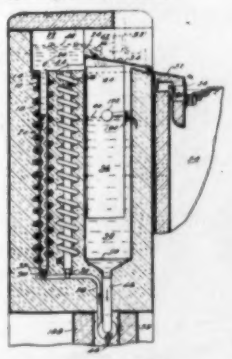
A plate exchanger for heat exchanging media comprising in combination, a plurality of separable identically shaped elongated substantially rectangular plates of light gauge sheet metal stock material arranged in stacked relationship to form immediate adjacent paths for the flow of the different media, each of said plates having a communicating opening for heat exchanging medium through each corner portion of the plate, said openings being arranged in rectangular relation to each other, and corrugations formed integral with each plate in the heat exchange area thereof. . . .

2,787,888. AIR CONDITIONING SYSTEMS. John Ralph Holmes, Lawrence A. Ewicker, and Robert R. Mandy, Lockport, N. Y., assignors to General Motors Corp., Detroit, Mich.



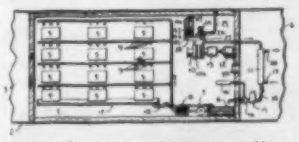
1. An automotive vehicle having an engine compartment and a passenger compartment, an instrument panel mounted at the forward end of said passenger compartment, an air conditioning apparatus mounted in said engine compartment comprising a refrigerant circulating unit including a compressor, a condenser operatively connected to said compressor, a receiver operatively connected to said condenser for receiving the refrigerant discharging therefrom, an evaporator, conduit means connecting said receiver to the inlet side of said evaporator. . . .

2,787,890. ICE MAKING AND REFRIGERATING SYSTEMS. Glenn Muffly, Springfield, Ohio.



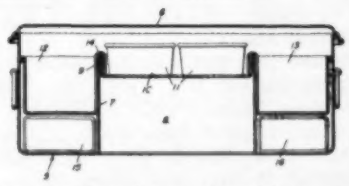
1. An ice maker including a cabinet containing the operating parts thereof, an ice storage compartment in said cabinet, a separate container for ice, means for delivering ice from said compartment to said separate container under the action of gravity, and control means for regulating the operation of said ice maker to start and stop the production of ice. . . .

2,787,889. AIRCRAFT COMPARTMENT COOLING MECHANISM. Douglas H. Swank, Seattle, Wash., assignor to Boeing Airplane Co., Seattle, Wash.



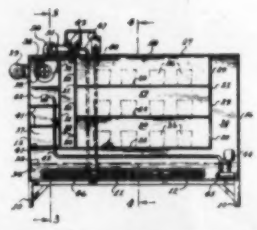
2. Aircraft compartment cooling mechanism comprising means operable to evaporate refrigerant into the compartment for cooling the same, compressor means operable to withdraw evaporated refrigerant from the compartment, condenser means operable to condense refrigerant compressed by said compressor means, and differential pressure sensitive control means exposed to the pressure in the compartment and to the external ambient atmospheric pressure and operable to limit the reduction in compartment pressure to a value at least not appreciably below external ambient atmospheric pressure by controlling operation of said compressor means to curtail transfer of refrigerant from the compartment to said condenser means.

2,787,891. COMBINED REFRIGERATOR AND COOKING PAN. Ferd J. Hengehold, Cincinnati, Ohio.



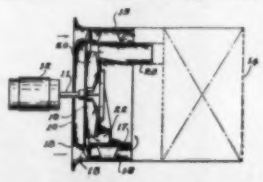
1. A food container comprising a pan having a lid, a removable bottomless chamber resting on the bottom of the pan, an upstanding lip at the upper edge of the chamber, an open receptacle, and a hanger member at the upper portion of the receptacle engaging the lip to detachably support the receptacle at one side of the chamber.

2,787,892. REFRIGERATING AND HUMIDIFYING APPARATUS FOR FOODS. Jesse Philip Pearce, Mesa, Ariz.

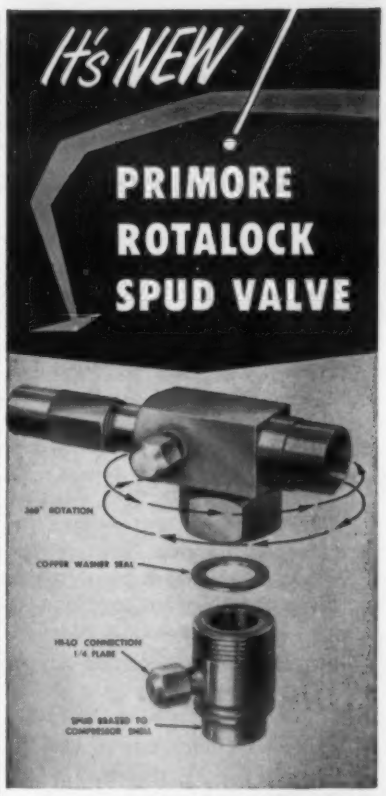


1. In a refrigerating apparatus for cooling and humidifying food items, a plurality of vertically disposed food compartments, access doors in the sides thereof, air inlets at one end of said compartments, air discharge openings at the other ends of said compartments, and air input manifold communicating with said air inlets, a blower connected to supply air to said input manifold, an air discharge manifold communicating with said air outlets, a water supply reservoir located below said food compartments and communicating with the bottom of said air discharge manifold, a vertically disposed absorption chamber located adjacent said air input manifold and connected at its upper end to the intake of said blower. . . .

2,788,171. FAN APPARATUS. Thomas F. Kulow, Gahanna, Ohio, assignor to Surface Combustion Corp., Toledo.



1. An impeller for fan apparatus which comprises a solid, impervious disc adapted for rotation about an axis normal thereto; a peripheral sleeve mounted on the disc concentric with the axis; a series of radial flow vanes mounted on the disc for impelling air movement; and a series of axial flow vanes mounted on the sleeve for impelling air movement.



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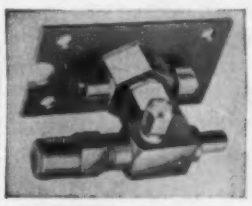
This new break-away type spud valve is engineered for compressors used for remote air cooled residential systems. It has a new built-in mechanical rotating connector that allows the valve to be rotated a full 360°. This new feature permits the valve to be placed in a direct line with suction or discharge tubing for easier, more efficient connection . . . permits instant compressor replacement in the field. Available in all standard sizes.



New Rotalock Valve also available with mounting bracket as shown.

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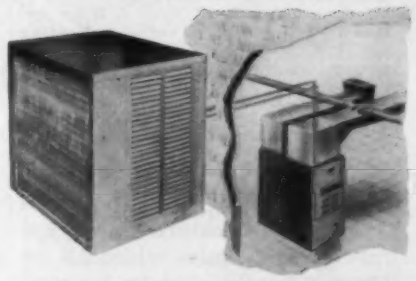

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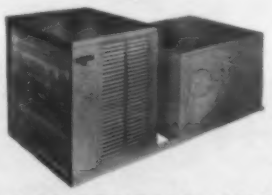

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DIVISION OF THE NATIONAL UNION ELECTRIC CORPORATION

Westinghouse To Up Laundry Unit Prices About 5% June 17

MANSFIELD, Ohio — Suggested list prices on Westinghouse laundry equipment currently being produced here are being increased approximately 5% effective Monday, June 17.

Jack Lee, manager of the Westinghouse laundry equipment department, said that currently the firm is producing its 25-in. "space mates" automatic washers and electric dryers. As other models in the line are produced, they too will reflect the new prices, he said, adding that "We have reached a point where it is impossible to continue to absorb rapidly rising costs."

Kelvinator--

(Concluded from Page 1, Col. 3)

Westinghouse Automotive Air Brake Co.

Alexander said expansion of the line "will increase the opportunities and profits of our present wholesalers, and attract new customers."

Appraising the independent wholesaler program adopted in 1953, Alexander said Kelvinator commercial condensing unit sales have increased 164% in the four-year period. The independent wholesaler program marked the departure from sales strictly through Kelvinator's own distribution organization.

The addition of the 10 new sealed units brings the total sealed unit line to 25 models. Kelvinator will continue to offer its open-type units in sizes from ¼ to 5 hp., Alexander said.

Mitchell Units--

(Concluded from Page 1, Col. 3)

country," Alsdorf said. "However, there has been a growing demand for reverse cycle units nationally.

"The problem has been to mass produce a room air conditioner heat pump with high capacity, and instantaneous change over arrangement and a greatly reduced refrigerant flow 'hiss.' This we have done with the 1957 Mitchell heat pump line."

In addition to the complete range of sizes, the units are offered in three separate styles: Mitchell's "Roto-Cone," "Ultrathin," and "Advance" models.

The new units are available in the following models:

Model No.	Hp.	Voltage	B.t.u./hr. Heating
RC-157*	¾	115	6,000
RC-1057*	1	230	8,500
RC-12357*	2	230	17,000
RC-257†	¾	115	7,000
RC-2157†	1	115	7,400
RC-457‡	¾	115	7,000
RC-4007‡	1	230	9,650

*Advance †Roto-Cone ‡Ultra-thin

All models feature a new type reverse cycle valve which allows the air conditioner to be electrically switched from heat to cool instantly and for the convenience of the customer the heat setting has been incorporated as part of the Mitchell Weath'r Dial which eliminates a separate switch, according to the announcement.

"Cost to the dealer will average $30 to $40 more per unit than equivalent room air conditioners not equipped with heat pumps," Alsdorf pointed out. "The units would then retail at between $40 and $60 more."

They Won't Be Home

(Plant Vacation Schedule)

Starting JULY 1 or earlier

Here is a handy guide to plant and office shutdowns that will help salesmen avoid useless calls and advise purchasers of what type shipments will be made during the shutdown period. This list will not be repeated. CLIP and SAVE for future reference.

Company	Shutdown Period Plant	Office	Shipments From Plant
Williamson Co.	6/21-7/7	None	Regular
Kirsch Co., Refrigeration Div.	6/21-7/8	None	Emergency
H&H Tube & Mfg. Co.	6/29-7/15	None	Emergency
Furnas Electric Co.	7/1 -7/15	7/1 -7/15	Emergency
Viking Copper Tube Co.	7/1 -7/14	None	Emergency
Halsey W. Taylor Co.	7/1 -7/14	None	Stock Only
McCall Refrigerator Corp.	7/1 -7/5	7/1 -7/5	Emergency
Reading Tube Corp.	7/1 -7/14	None	Regular
Revco, Inc.	7/1 -7/8	7/4 -7/5	Regular
Acme Electric Corp.	6/28-7/14	6/28-7/14	Stock Only
Delco Appliance Div.	7/1 -7/15	7/1 -7/15	Emergency
Swift Lubricator Co., Inc.	7/1 -7/15	None	Emergency
Keco Industries, Inc.	6/24-7/7	6/24-7/7	Emergency
W. Mannhardt & Son	7/1 -7/15	None	Stock Only

Other vacation schedules will be carried in future issues

Antibiotics May Be Harmful--

(Concluded from Page 1, Col. 5)

been treated with small doses of the antibiotic streptomycin became resistant to the drug, it was reported to the Society of American Bacteriologists meeting here.

Some antibiotics are already being used in the preservation of food.

One of many experiments aimed at studying the public health aspects of antibiotic residues from non-medical uses, the investigators said this type of usage could occur in food preservation, plant disease control, and animal nutrition.

In the particular experiment, mice received low-level doses of streptomycin varying from zero up to 20 micrograms a day in drinking water. After a month of this diet the naturally existing micro-organisms in the bodies of a fifth of the test animals getting the highest dosage had become as much as five times more resistant to the drug, the scientists found.

Guinea pigs were also used and fed a diet including greens that had been treated with a streptomycin dip for preservation purposes. Micro-organisms taken from their throats also showed increased resistance, it was noted.

Emmett Dies--

(Concluded from Page 1, Col. 4)

and was active in the affairs of the Refrigeration Equipment Manufacturers Association and later the ARI.

He is survived by his widow, Eugenia; two sons, James Emmett III and Richard; a daughter, Mary; and his parents, Mr. and Mrs. James Emmett of Magnolia Springs, Ala.

MODEL FP
for furnace plenum
Model | Capacity Btu/hr* | Cfm
FP-2 | 25,600 | 800
FP-3 | 35,900 | 1200
FP-5 | 61,300 | 2000
MODEL DAC
for duct installations
Model | Capacity Btu/hr* | Cfm
DAC-2 | 25,100 | 800
DAC-3 | 37,300 | 1200
DAC-5 | 61,200 | 2000
MODEL DAH
for remote installations
Model | Capacity Btu/hr* | Cfm @ SP
DAH-2 | 24,800 | 950
DAH-3 | 39,400 | 1375
DAH-5 | 64,800 | 2180
*Capacity based on 80° DB 67° WB entering air, 40° F suction temperature, R-12 or R-22 refrigerant.

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OF AIR CONDITIONING JOBS IN THE 2 TO 5 TON MARKET

Three new lines of Larkin air conditioning equipment make it possible for any dealer or contractor to sell complete air conditioning systems to the vast residential and commercial market, where 2, 3, or 5 ton capacities will do the job.

The new, compact, and highly efficient units are designed for installation in the plenum of vertical flow furnaces, in the duct work of forced air systems, or in attic or crawl spaces. The dealer or contractor supplies his own brand of compressor, which can be installed in a remote location to keep noise at a minimum. Larkin Zephyrcon air cooled condensers are ideal companions for the new Larkin air conditioners.

Get the facts on these new Larkin units and be ready to get your share of profitable air conditioning business. See your wholesaler, or write direct for Bulletin 1054.

HERE ARE THE FEATURES:

- Available in 2, 3, and 5-ton capacities.
- Equipped with famous Larkin cross-fin coil, staggered copper tubing with aluminum fins. UL approved.
- Evaporator equipped with pressure-type distributor and external equalizer connection.
- Mastic coated drain pan to prevent sweating.
- Pre-punched holes for easy installation.
- Cases of the DAH and DAC are fully insulated and finished in gray enamel.
- The DAH is equipped with centrifugal fan, permanently lubricated motor, & throw-away filters.

LARKIN COILS INC.
519 MEMORIAL DRIVE, S.E., ATLANTA, GEORGIA

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